5th GRSG–AECD Informal Meeting

. September. 2

Korea Transportation Safety Authority
Korea Automobile Testing and Research Institute
Chief Researcher Kim Sung Sub
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Introduction of KATRI

5th GRSG–AECS Informal Meeting

Total Area : 2,146,383 m²
- Indoor Test Building : 29,464 m²
- Proving Ground : 2,046,000 m²

Major Responsibilities
- Safety Defect Investigation
- Korea New Car Assessment Program
- R&D Projects on vehicles safety regulations
- Harmonization of vehicle safety
- Certification of environment and road safety facilities etc

Vision: World’s Best Research Institute in Vehicle Safety
Four Strategies
- Improvement of vehicle safety
- Development of advanced technology for safety of future vehicles
- Active Participation in global harmonization of vehicle safety regulations
- Strengthening of global cooperation on vehicle safety

Proving Ground
 Noise & EMC Test Lab
Impact Test Lab
Collision Test Lab
Future Automobile Test Building
Driving Roll-Over Test Lab
Performance Test Lab
General Inspection Lab

Korea Transportation Safety Authority
### Over View
- Participation Organization: 11
- Period: Dec., 2009 ~ June., 2017 (7Y 9M)
- Budget: 28 m$ (Government: 21m$, Private: 7m$)

### Grants

<table>
<thead>
<tr>
<th>Year</th>
<th>'09년</th>
<th>'10년</th>
<th>'11년</th>
<th>'12년</th>
<th>'13년</th>
<th>'14년</th>
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### Goal
- Assessment Technology of Advanced Safety Vehicle

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**E-Call (Emergency Call)**

- Vehicle compatibility
- Speed sensitive active head restraint
- Rollover accidents
- ACC/AEBS
- LDWS
- Blind Spot
- AFLS
- Mitigate Casualties
- Improve Active Safety Technology
- Safety Integrated With IT

- Aggressiveness of SUV
- Active Pedestrian Safety
- Occupants Safety on Rollover
- AEBS for passenger vehicle
- ESC for commercial vehicle
- Human Injury D/B
- Test device for ASV
- Electronic Safety
- Effect Analyses for ASV
- Assessment Method for Active Safety Vehicle

- Far Side Passenger Protection
- Sleep Driving Detection
- Night Pedestrian Detection
- Sleep Detection Device
- Autonomous driving
- Human Injury D/B

**Study on eCall**

**Korea Transportation Safety Authority**
The Outcome of 1st eCall Study

- Standard (draft) for eCall Device Performance
- Development of passenger injury determination algorithm
- Development of eCall device for vehicle and smartphone

<Ecall Device for Vehicle>

<Algorism for injury discretion>

<Ecall for smartphone>

<Algorism for passenger state>
KNCAP Roadmap for eCall

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KNCAP Roadmap(2014 ~ 2019)

- **Collision Safety**
- **Seat Safety**
- **Pedestrian Safety**
- **Rollover Safety**
- **Brake Safety**

### 2013 - 2019 Roadmap

<table>
<thead>
<tr>
<th>Year</th>
<th>Full Frontal</th>
<th>Offset Impact</th>
<th>Side Impact</th>
<th>Pole Side Impact</th>
<th>Whiplash</th>
<th>Pedestrian</th>
<th>Active hood / Pedestrian Airbag</th>
<th>2nd row seat (Dynamic)</th>
<th>Rollover/Brake</th>
<th>Long.</th>
<th>Lateral</th>
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<td>5%ile F(Passenger)</td>
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<td>AE-MDB</td>
<td>Active hood</td>
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<td>FCWS</td>
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<td>Offset Impact</td>
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<td></td>
<td>AE-MDB</td>
<td>Flex-PLI / Grid method</td>
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<td>AE-MDB</td>
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<td>AEBS(Inter-urban, City, Pedestrian)</td>
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<td>ACC</td>
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<td>AE-MDB</td>
<td></td>
<td></td>
<td>LKAS</td>
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<td>V2X: +a</td>
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<tr>
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<td>AE-MDB</td>
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<td>etc(DDS, DADSS, e-Call)</td>
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- **Amend of Notice Effective**

KNCAP eCall

Korea Transportation Safety Authority

TS
Announced comprehensive measures to reduce traffic accident casualties
13year The national policy setting meeting

**Ministry of Transportation Goal**
Performance Goal: Traffic accidents 30% reduction by 2017(compared to 2012)

**eCall Servie ICT Vision:**
Future emergency response system, leading to traffic safety

**Promotion Goals:** eCall service promotion implementation and activation

**Promotion Challenges:**
- To develop eCall device for vehicle
- To build a Private Center for eCall service
- To provide laws for the eCall service
eCall Service in Korea

- MOZEN Service
  - Business Start: Since 2003
  - Applied Vehicles: Hyundai-Kia Automotive
  - Communication method: 3G(KT, SKT)
  - Fare: free for 2 years after purchase, 7 dollars per month
  - Subscriber: 200,000
  - Main function
    - Safety Service: SOS, Automatic airbag deployment notification, Theft tracking Theft alarm notification, 119, 112 call dispatch
    - Vehicle Management Services: Supplies, Remote diagnosis, Remote door opening Vehicle location etc)
    - Route guidance service: Quick directions, Risk areas
Wireless subscribers (’14 year): 55 millions (Population: 51 millions)

<table>
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LTE Coverage (’11 ~ ’13 year measurement data)

Communication Trends
Domestic communication technologies are rapidly changing and
Communication company gradually has been reducing 2G service
The LTE can cover the whole country in Korea
Communication method and MSD should follow the standards of each country
Minimum standards regarding to physical and mechanical safety
Thank You for Your attention