The 5th Forum for South East Asia

The 10th Public and Private Joint Forum in Asia Region

The 24th Asia Government / Industry Meeting

3rd -5th December 2019

Kuala Lumpur, Malaysia

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Day 1

The 5th Forum for South East Asia

Welcome Remarks by Mr.Ir. Mohd Yusop Bin Mohamad

Mr. Ir. Mohd Yusop Bin Mohamad Deputy Director of Automotive Division, Road Transport Department Malaysia, thanked the participants, including the public and private partners, for attending the 5th Forum for South East Asia. Main objective to enhance cooperate on ASEAN member states based on WP29 frame work. JASIC promoting actively on ASEAN MRA. The event will serve as an opportunity to open doors

Opening Remarks by Mr. Takahiro Omori

Thanked Malaysian government and JASIC for this event. The 5thmeeting for South East Asia purpose is to promote MRA so that vehicle safety requires for higher level. Mr. Takahiro enlighten the purpose of the Forum is to give the opportunity to open doors and engages participant to give the progress report on ASEAN MRA activities, the introduction of Technical Guideline for ASEAN mutual recognition arrangement on RTD, Malaysia and also presented the JASIC activities for promoting of ASEAN MRA.

Progress report of activities on ASEAN Mutual Recognition of Arrangement ASEAN Secretary and RTD, Malaysia.

Presented by Mr. Hj. Md. Zin Bin Hj. Yaacob (Department of Land Transport, Brunei)

The APMRA is drafted and deliberated by the (ACCSQ-APWG) and (TFMRA). By APRMA Agreement, all part and systems under the annexed UNRs will be accepted to other AMS after tested and approved by the Listed Technical Services. The ASEAN Automotive Committee (AAC) will be established to implement the APMRA.

Technical requirements of 51 UNRs segregated in 3 phases. At the first phase, as many as 10 UNRs had been agreed to harmonized as follows: Braking, Braking System (M1, N1), Seat, Head Restraint, Audible Warning Device, Speedometer, Noise (Motorcycle), Rear View Mirror, Sound Emission and Steering System. The 9 UNRs in phase 1 with deviations or modification and UNRs in Phase 2 are under deliberation by APWG in parallel and this will be further discussed in next 31st APWG Meeting that will be schedule on March 2020.

The 30th APWG Meeting noted that the Viet Nam has delayed the confirmation to Draft 21 due to its national process by awaiting the input from stakeholder. The Viet Nam will be confirming any input to Draft 21 by 31 December 2019. The APMRA will be the ASEAN Economic Minister

(AEM) retreat, tentatively scheduled 30-31 March 2020. AMS requested for Technical Guidelines review with their technical counterparts and revert by 6 December 2019.

Technical Guideline for ASEAN Mutual recognition arrangement on RTD, Malaysia

Presented by Mr. Naim B. Husni (Malaysia Automotive Robotics and IoT Institute)

The purpose of the guideline is to promote the transparent and smooth administration of the ASEAN MRA among member states. The guideline shall conform to the framework of the UN 1958 Agreement and the concept of coming UN R 0 for M1 category as a system of Whole Vehicle Type Approval. On the guideline stated that the rights and obligation of the member states. However, the guideline is still in draft and waiting for approval from AMS.

Rights

1. Shall not necessarily be required to demand conformity with all UN Regulations to motor vehicles, as set forth in Annex 1 of the ASEAN MRA.

2. May develop own Technical Services. On the other hand, a Member State shall not be required to have a Technical Service.

3. May preferentially designate a Technical Service located in the ASEAN region. However, a Member State may concurrently designate a Technical Service located outside of the ASEAN region.

4. May keep existing domestic regulations as an alternative to the UN Regulations for the time being. In such cases, the ASEAN MRA shall not be applied to the alternative domestic regulations.

5. Applying UN regulations may refuse to grant and to accept the precedent series of UN Regulations prescribed in Annex 1 of the ASEAN MRA.

6. May establish environmental and safety regulations other than the UN Regulations, as set forth in Annex 1 of the ASEAN MRA. However, in light of the addition of the UN Regulations to the Annex 1 of the ASEAN MRA in the future, a Member State shall harmonize the regulations with the UN Regulations.

7. In the event that a Member State has confirmed that the matters set forth by the ASEAN MRA or the administration thereof could have serious adverse effects on safety or the environment, it may take whatever action that is necessary promptly, upon fully explaining its actions to the AAC.

Obligation

1. Shall not refuse the results of the conformity assessment issued by the Technical Service, in accordance with the provisions of the ASEAN MRA, except where it has confirmed a serious adverse effect, as set forth in ASEAN MRA.

2. When accepting the results of the conformity assessment issued by the Technical Service in accordance with the provision of the ASEAN MRA, shall not demand its own requirements or tests relating to equipment or systems provided for in the UN Regulations, as set forth in Annex 1 of the ASEAN MRA.

3. In the event that it discovers a law that would impede the acceptance of the results of the conformity assessment issued by the Technical Service in accordance with the provisions of the ASEAN MRA, shall promptly revise such law.

4. In the event that it discovers domestic screening procedures or approval procedures that would impede the acceptance of the results of the conformity assessment issued by the Technical Service in accordance with the provisions of the ASEAN MRA, shall promptly remediate such procedures.

5. Shall not impose its own regulations that would impede the free circulation of motor vehicles and/or motor vehicle components within the ASEAN region, which is the intended purpose of the ASEAN MRA, and make efforts toward the realization of harmonization of standards and the mutual recognition of the results of conformity assessments within the ASEAN region.

JASIC activities for promoting of ASEAN MRA

Presented by Mr. Ikuo Nakatani, Chief representative, JASIC Jakarta Office

JASIC have undergo 3 programs for ASEAN MRA, the first is the Workshop on Automotive Regulations and Certification under the Cooperation between ASEAN and Japan (APWG) to cooperate and coordinate APWG to implement ASEAN MRA. The APWG program is participant by government and industries of Asian members state. The latest APWG meeting was held in Kuala Lumpur on October15,2018.

Public and Private Joint Forum in Asian Region to realize international harmonization of vehicle regulation and mutual recognition of approvals under the 1958 agreement in Asia. Forum has been co-organized by JASIC and a government of Asian country which the forum is held.

Asia Expert Meeting to assist deeper understanding of the 1958 agreement and UN regulations and enhance the technical skills of approval process by providing know how regarding the explanation on the 1958 Agreement consist of the process of accession, benefit and the need of preparation of the agreement.

JASIC will support the implementation of ASEAN MRA by utilizing 3 programs in the future which for APWG meeting, JASIC will do the workshop in order to share the information with AMS about the current topics. JASIC will provide information of WP29 activities and the opportunity that Asian Members State and Industries review on latest progress of MRA by using the PP Forum platform. In Asia Expert Meeting, JASIC will continue to provide technical advices for requests of each Asian Members State.

Q&A

JASIC, Japan

Question - What will be the intention of UNR100 and UNR136 to be implemented?

ASEAN

Answer - Just for the future implementation.

Coffee Break

Certification Test for Automotive Type Approval by National Traffic Safety and Environment Laboratory (NTSEL, Japan)

Presented by Mr. Takeshi Korenori

According to the Article 1.4 in schedule 2 of the 1958 Agreement, the TS shall demonstrate appropriate skills, specific technical knowledge and proven experience in the specific fields covered by the UN Regulation for which are designated. The technical services shall comply with but not necessarily be approved/accredited in accordance with the standard listed in part 2 of this schedule which are relevant for the categories of the activities for which they are designated (ISO/IEC standards).

The country has to accede to the 1958 agreement (The country must be Contracting Party (CP) of the 1958 agreement. The country has to apply the UN regulation on which the certificate is based. The CP shall specify an Approval Authorities (AA) and AA may designate the TS for UN Regulation. The approval test will be performed or supervised by TS. The test procedures to be applied and the specific equipment and tools to be used shall be those specified in the UN Regulations.

The technical services shall ensure that they are free from any control and influence of interested parties which may adversely affect the impartially and quality of the test and inspections. The TS shall have access to the test facilities and measurement devices necessary to supervise of perform test or inspections referred to the UN Regulation for which the technical services are designated.

Report of the 5th Industry Meeting for South East Asia (ISEA)

Presented by Mr. Emjunan Sihite, Secretary AAF Technical Committee-3

The 5th meeting was held in Kuala Lumpur on 2nd December 2019. The meeting was attended by the automotive industries representatives from ASEAN Member States (Indonesia, Myanmar,

Malaysia and Japan. The meeting acknowledged the outcome of the 23th Task Force for MRA and the 30th ACCSQ-APWG meeting in Bohol- Philippines. Most members have confirmed the necessity of harmonization of fuel standard in order to harmonization regulation. The meeting also supported ASEAN MRA implementation as soon as possible in 2021 with the 10 harmonized UN Regulation in 1st phase and the remaining 9 UN Regulations that has not yet harmonized to be implemented after the timeline has been agreed among the government officials.

The meeting insists to propose to government for introducing the listed of Technical Service in accordingly as reference to all AMS. The trial run of ASEAN MRA implementation also discussed in order to identify any possibility as following,

1.1 To identify which national regulation can be covered by UN Regulation under ASEAN MRA scheme.
1.2 The confirmation of the acceptance of the ASEAN MRA test report by ASEAN Technical Service.
1.3 For the trial propose will done by UN Regulation for M1, N1 and L vehicle category as follows R83, R13H, R43, R40 and R28.

Q&A

RTD, Malaysia

Question - By referring to slide no. 4 on Certification test for Automotive Type Approval by National Traffic Safety and Environment Laboratory (NTSEL, Japan) (seek clarification on term of 'apply' in the statement no.2) whether it is adopt or enforce?

NTSEL, Japan

Answer - The term 'apply' means by choosing and introducing the UN regulation.

<u>End of Session</u>

Day 2

The 10th Public and Private Joint Forum in Asian Region

Opening Remarks by Mr. Yoshifumi Takemura, Deputy Director for International Affairs Office, Road Transport Bureau, MLIT Japan

Mr. Yoshifumi Takemura thanked all participant for continue supporting the forum since the first forum. He also expressed his gratitude to Dato' Sri Shaharuddin Bin Khalid, Director General, and JPJ members who kindly supported to hold today's forum. He informed that Japanese legislation was just prepared towards the introduction of automated driving vehicles and at the United Nations World Forum for Harmonization of Vehicle Regulations (WP29) Safety regulation for the automated driving systems are being considered in cooperation with the United States, Europe, China, etc. He remarked Electric vehicles, fuel cell vehicles, hybrid vehicles, etc. are positioned as the “next generation vehicles” in order to promote energy conservation in vehicle sector and those are intended to be popular and in this status. It is important for Asian countries to work together to respond to these new developments. Finally, he did hope that we can further strengthen our cooperation through meaningful and active discussions in today's forum.

Opening Remarks by Mr. Takahiro Omori, Director General of JASIC

Mr. Takahiro Omori thanked to all audience for attending this event and express his gratitude to the host for warm hospitality. On his opening remarks content on few topics regarding the attention of this Public and Private Joint Forum in Asian Region is to provide the great platform on mutual recognition and also sharing information on activities on promoting the WP29 regulation to ASEAN Member States (AMS). The country report of AMS will be presented on this forum.

Welcome Address Industries by Mr. MazwanMohd Safwan, MAA

Mr.Mazwan represent the Malaysia Automotive Association (MAA) express his gratitude and special thanks to the organizer including the MLIT Japan for great contribution to this forum. Mr. Mazwan appreciate the vital offer of the JASIC in organizing the PP Forum in order to give the great platform for Malaysia Industry player for mutual harmonization of vehicle regulation as well as mutual recognition will bring the common goal of promoting the safety, environmental and also in economic. He also positively encourages this kind of mutual agreement and willing to work together with government so the objective will be achieved. He also enlightens the Connectivity, Autonomous, shared and Electric (CASE) must be in line with the mutual recognition for the better environment for the regulatory harmonization to both regulators and manufacturer.

Welcome Speech by Mr. Kamal Hisham Abu Bakar, Principal of Logistic & Land Transport Division, Ministry of Transport Malaysia

Mr. Kamal Hisham welcomed and thanked all participants including supportive partner, Japan Automobile Standards Internationalization Center (JASIC), Ministry of Land, Infrastructure, Transport and Tourism of Japan (MLIT) for a great contribution to this gathering and also for continuous efforts to support activities promoting internalization of government standards and certification system for motor vehicle based on WP29 framework. Activities like workshops, expert meetings, seminar and forum have facilitated resolving the issue on implementation of UN Regulation in this region.

He ensures that further cooperation in Asian region on harmonization of vehicle regulations as well as mutual recognition will bring a common goal towards vehicle safety including its technical, scientific, engineering and socioeconomic perspectives which will indirectly further enhance trade facilitation among AMS. Recent Topics on WP 29 Activities and Co-operation in Asian Region

Photo Session and Coffee Break

Recent Topics on WP.29 Activities

By Mr. Michio Miyamoto, Chairman of WP.29 /IWVTA Sub-Committee

177th WP.29 Results (12-15 March 2019)

1.1958 Agreement (Revision 3 of 1958 Agreement and IWVTA)

-Amendment of schedule 4 (Approval Numbering System) by Increase the digits from 4 digits to 6 digits has been adopted. IWVTA UNR0-01 series of UNR 0 has been adopted (Amendment of Annex 4: updated of applicable UNRs list). IWVTA Phase 2activity was approved (2018-2022). The draft list (addition of UNRs to Annex 4) was presented and requested each GR to examine it by June 2019.

-New UNRs (Simplification of lamps and BSIS) have been adopted:

*UNR 148 (LSD: Light Signalling Devices)

*UNR 149 (RID: Road Illumination Devices)

*UNR 150 (RRD: Retro-Reflectives Devices)

*UNR 151 (Blind Spot Information System for the Detection of Bicycles)

46 amendments of UNRs have been adopted.

2.The 1998 Agreement

-New GTR priority list is presented. Except automated driving issue.

-Priority List for Automated Driving and it will be discussed in GRVA in June WP29.

-No new/amendment of GTR has been adopted.

178th WP.29 Results (25-28 June 2019)

1.1958 Agreement (Revision 3 of 1958 Agreement and IWVTA)

Proposal of supplement of UNR0-00 and UNR0-01 were agreed. Those are the clarification of notification method for accepting previous series of UNRs. Proposal of UNR0-02 was agreed. (Update of Annex 4 (technical requirements UNR list) and clarification of DoC). IWVTA 2 activity. The draft list (candidates of additional UNRs to Annex 4) based on each GR's review result was reported.

As for. new UNR, new UNR (AEBS (M1, N1) has been adopted. (Advanced Emergency Brake): UNR152. 21 amendments of UNRs have been adopted.

2.The 1998 Agreement

-Proposal of amendment 5 to GTR15 (WLTP) has been adopted. (Canada and US: abstain) WLTP Phase 2b: Improvement of Road Load test method.

-Proposal of amendment 2 of GTR19 (WLTP Evap) has been adopted. (Canada and US: abstain) WLTP Phase 2b: Introduction of the alternative calculation method for VT-Shed.

-No new GTR has been adopted.

3.Automated Vehicles

WP29 discussed Automated/autonomous vehicle in order to accelerate these activates and to give the guidance to GRVA and frame work document was adopted on working principle, Safety vision, Priority items with related informal working group and its schedule. ToRs for each informal working group were adopted.

179th WP.29 Results (12-14 June 2019)

1.1958 Agreement (Revision 3 of 1958 Agreement and IWVTA)

-IWVTA UNR0-00 supplement 1 and UNR0-01 supplement 1 have been adopted.

-IWVTA UNR0-02 series of UNR 0 has been adopted.

-IWVTA Phase 2 activity was approved (2018-2022). The draft list (addition of UNRs to Annex 4) was presented and endorsed by WP29.

-DETA (Database of exchange of Type approval documentation) operation status was introduced and already in operation.

39 amendments of UNRs have been adopted.

2.The 1998 Agreement

-Amendment 4 of GTR 2 (WMTC) has been adopted.

-No New GTR has been adopted.

3.Other Topics

-The period of WP29 has been shortened from 4 days to 3 days from this time due to the budget issue.

“UN Decade of Action for Global Road Safety”, OICA presented “Manifesto” to support this activity (Recommend min list of UNRs for the emerging countries)

World Forum for Harmonization of Vehicle Regulations (WP.29) Recent Developments

By Walter Nissler, Chief of Vehicle Regulations and Transport Innovation Section (Secretary of the World Forum for Harmonization of Vehicle regulations)

Mr. Nissler presented on the new role for Inland Transport Committee (ITC) as the UN platform for inland transport to help efficiently address global and regional need in inland transport. He added that the new format of WP.29 proper session from Tuesday afternoon until Thursday. WP.29 and automated/autonomous vehicles have a specific working party which is GRVA. The framework document is based on AVs as of L3, safety vision, common principles, priorities and work plan. It’s also had clustering of work which is IWG on functional requirements (FRAV), IWG on validation methods (VMAD), IWG on EDR/DSSAD and IWG on Cyber/OTA.

The Agenda 2030 and Road Safety towards the Sustainable Development Goals (SDGs) have two main targets and directly relevant for road safety. By 2020, halve the number of global deaths and injuries from road traffic accident and by 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons. Each country has same models on car but have different safety depending on national legal requirements (no airbags, lower quality material, less welding points, fewer structure components, etc…). The most important UN Vehicle Regulations is to make a change to road safety.

Lastly, Mr. Nissler presented on the OICA Manifesto which is the global motor vehicle industry, as represented through OICA, is strongly dedicated to the improvement of road safety worldwide. OICA strongly supports an integrated approach for road safety and called on all governments worldwide to place all actors in the auto industry on an equal competitive footing by setting compulsory minimum vehicle safety performance requirements for all new vehicles sold on their territory.

Report on WP.29 Related Activities

Report from China / CATARC

Reported by Mr. Guo Miao, National Technical Committee of Auto Standardization

Overview of the China history of participating in WP.29.

China government deployed expert to participated in WP.29 meeting on 1996 before signed the 1998 Agreement as contracting party, officially participated in WP29 meeting. China more interest on automated/autonomous vehicles, EV and Tires, Noise under GRBP.

For Automated Vehicles will be focusing on certification and management of functional requirement for AV. The test and assessment for Autonomous Vehicles method that will be included the test scenario for AD Vehicles Safety.

Electric Vehicles will on traction battery thermal diffusion, vibration, seawater immersion and also power of hybrid electric vehicle and cycle life.

Tire & Noise under GRBP will be focusing on additional sound emission provision, warning tone for vehicle reversing and research on wat performance of worn tire.

However, CATARC also facing lot of obstacles on lack of competent technical expert on regulation due to the UN Regulation and UN GTRs changed and updated rapidly. CATARC also mention that there is language barrier on interpreted the regulation. The mutual harmonized also difficult to do due the different technical and economic interest of contracting parties.

Report from India

Reported by Mr. Dr. Piyush Jain, Ministry of Road Transport and Highways, Government of India

Overview of the India history of participating in WP29

In India Standing a committee to deal with WP29 related matters was formed in February,2003 under the Chairmanship of J.S MoRTH. ARAI was appointed as National Secretariat and the Working Groups are identified to deliberate on technical subjects under consideration in respective GR groups.

The standards are recommended for implementation consideration the lead time required for different categories of vehicle, time required for setting of facilities and time required for certification and testing considering volume of models to be tested.

India is a signatory to 1998 Agreement with effect from April 2006.

India has contributed in UN Global Technical Regulation (UN GTRs)/ Amendments to UN GTRs under 1998 Agreement, on Worldwide Motorcycle emission Test Cycle (WMTC), Worldwide harmonized Light Vehicle Test Procedures (WLTP), Tires and Environmental and propulsion performance requirements (EPPR) for L Category Vehicles.

India through Director-ARAI has served as Vice-Chairperson of GRPE under UN ECE for the session of the year 2016, which further enhanced India's participation. Principally National Standards in India (AIS/IS) are aligned with UN Regulations /UN Global Technical Regulations (GTRs). India will continue its active participation in all the activities of WP.29 and its Working Parties for Safe Road Transport.

India refers to complete ambit of regulations formed under WP29 forum and will more focusing on Emission, Alternate fuel and also EV.

Through the participating WP29, India has developed the requisite national regulation towards the safety and emission roadmap for vehicles.

Report from Japan / MLIT

Reported by Mr. Yoshifumi Takemura, Deputy Director for International Affairs Office, Road Transport Bureau, MLIT Japan

1. Status as contracting party of 1958 or 1998 agreement

Japan has acceded to 1958 agreement in 1998. As for the 1998 agreement, it entered into force in 2000.

2.History (Experiences) of participation in WP29

Since early 1980s, we have started participating in WP29 to grasp the UN regulations.

A lot of consideration is made to join an international agreement such as 1958 agreement, so knowledge from many stakeholders are important and we established JASIC in 1987.

At that time, even though we had not acceded to the agreements, JASIC has contributed WP29 and GR activities by providing data and its insight especially passenger car brake, installation of light, side impact and so on.

After the accession of both agreements, Japan contributes WP29 activity.

3.What are your interests or focused agenda among WP29 or each GR agenda?

We widely cover the agenda of WP29 and GRs.

However, the most important issue right now is the automated driving.

We have been contributing the activities as vice-chair of GRVA or co-chairs of almost Informal Groups under GRVA.

4. Any of your (countries') comments in participating WP29.-Benefit -Obstacle, problem -support needed to enhance current activities

I have attended GRVA and some Informal Working Groups under GRVA. From my experience in attending these meetings, I think WP29 is very flexible agreement and you could get much rights compared to its obligation the Contracting Parties need to do.

The most important right is to issue the certificate which will be accepted by other counties.

On the other hand, what we have to do are basically two things: one is to secure the certificate technical level of Technical service. Another one is accepting other country's certification. Also, for the government's perspective, rulemaking process become more efficient. It could share the burden of rule-making globally.

It is also really a great experience to grasp whole picture of the UNR and GTR with their recent movements directly and may even give the influence to them.

Report from Malaysia / RTD

Reported by Mr. Azzaharin Bin Allias, Road Transport Department (JPJ)

1.Status as contracting party of 1958 or 1998 agreement

Malaysia join WP.29 on 4th April 2006 on the objective to reduce fatalities index, increase vehicle safety, implement the N Regulatory & adapt the WP.29 framework, establish comprehensive Vehicle Type Approval (VTA) Procedure and lastly to promote and inculcate vehicle safety concept through E52 UNR certification.

2. History (Experiences) of participation in WP.29

-Malaysia start to gazette UN regulation under Road Transport Rules in 2007

-JPJ have gazette UNR 66: strength of bus superstructure in 2008

-JPJ have designated some Technical Service (TS) under UN Type Approval System in 2012

-Malaysia currently have enforce 100 UNR to increase safety features of motor vehicle & reduce pollution and to comply standard regarding vehicle safety & performance, Environment & anti-theft

3. Current challenge & obstacle in Malaysia

-Limited Knowledge & Competency

-Limited Testing Facility & Test Bed

-Limited Budget

4. Future direction JPJ under framework WP.29 framework

-To enhance the involvement of JPJ as Type Approval Authority at the level of WP29 and 6GRs;

-To strengthening the role of JPJ as the leading agency of the implementation of WP29 framework in Malaysia; and

-To empower the competency and knowledge / technical skills of JPJ's officer with regards to the WP29 framework and the UN Type Approval System.

Report from South Korea / KATRI

Reported by Mr. Tae Yong Kim, Korea Automobile Testing and Research Institute

Overview of the Korea history of participating in WP29

South Korea has signatory the 1958 Agreement since 2004 and 1998 Agreement on 2000. South Korea started participating in WP29 as observer and realize the importance of harmonization standards in order to avoid the technical barriers trade among the automotive industries in Korea. Currently, Korea made a draft for Act and Standard in order to support providing environment and commercialize the Level 3 automated vehicles. By participating in the WP.29 allowed the Korea be more specific in established the roadmap for automotive standard and this WP29 also can be great platform for South Korea gain the information about problematic parts. However, the procedure for standard making will take a long period.

Report from Thailand

Reported by Ms. Jirapon Kaewkraison, Department of Land Transport (DLT)

Status of Thailand as a CP of 1958 Agreement

-Since 1996, Thailand is a contracting party of 1958 Agreement

History (Experience) of participation of WP.29

-since early year 2000 participate as an observer on WP.29 and some GRs

-then joint feasibility study the Agreement with relevant government agencies and industries and conclude best suitableness for the country

-finally propose to MOT & the cabinet for acceding1958 Agreement in 2006

Our interest's agenda on WP.29 & GRs

-vehicle safety and environment UNR as mentioned in the Plan is first priority, basic active and passive safety

-advanced active and passive safety in line with government policies, e.g. EV, AV

Benefit of participation for Thailand

-grasp whole picture of UNR making process and recent movement may affect to draft notification under the Plan

Obstacles in participating

-budget constraint, not participate in every WP.29/GRs session a year

What support is preferable

-Follow the updates via WP.29/GRs report

-Request expert meeting via JASIC support

-Join staff training during specific UNR drafting with TAIA (with JAMA support)

Report from Vietnam

Reported by Mr. Nguyen Huy Duc, Vietnam

Status as contracting party of 1958 or 1998 agreement

-Viet Nam hasn't become a contracting party of 1958 and 1998 agreements yet.

History (Experiences) of participation in WP29

-Vietnam Register, as Representative of Vietnam, has attended the WP29 Meeting as an Observer in recent years.

-Since 2000s, we have started participating in WP29 to grasp the ECE regulations, international harmonization.

Interests or focused agenda among WP29 or each GR agenda

We widely convers the agenda of WP 29 and GRs. However, at present, for making the new standard and regulation, we are focusing on agendas related to Autonomous Vehicles, Electric Vehicles and IWVTA

Benefits

-Grasping the general development of automobile, auto part's technologies, the regulations of the world;

-Development the roadmap and strategy for making the law system, national standards and regulations for vehicles;

-Enhancing the quality of automobiles, auto-part as well as the competency among manufactures in Vietnam.

Obstacle

-Because of budget limitation, we can't attend every WP29 and GRs in a year

Report from Pakistan

Reported by Mr. Ayaz Asim, Pakistan

Status as contracting party of 1958 or 1998 agreement

-Not sign any agreement yet

-Only participating as an observer in 2016

Comment from Walter Nissler, Chief of Vehicle Regulations and Transport Innovation Section (Secretary of the World Forum for Harmonization of Vehicle regulations)

4 main elements from the reports from the countries:

1) budget – which is no solution.

2) training and knowledge – possibilities to provide assistant from UN secretary side, more efficient to bring 3 experts to this region to organize workshops.

3) testing facilities – 1958 agreement every type approval authority can designate other Technical Service from any other contracting parties to gain knowledge and experience by starting work together with long standing TS.

4) barriers to entry to the 1958 – applying all the requirement and gradual enforce to strength safety requirement for the vehicle market.

Q&A

Japan

Question -What is the status as to signed the 1958 or1998 agreement?

Pakistan

Answer -Pakistan need the approval of the cabinet members to sign the agreement.

Japan

Question -How does Malaysia secure the budget to go to WP.29 meetings?

RTD, Malaysia

Answer -Malaysia also have constraint on budget. But with proper planning Malaysia can attend the meeting for the past 2 years with the main objective to gain experience and understanding on WP.29 framework.

Report from JASIC forum between China, India and South Korea

Reported by Mr. Masaru Yodawara, Vice Chairman of International Cooperation Committee, JASIC

As one of the pillars of JASIC activities, we set up the bi-lateral forum between China, India and South Korea annually. The meeting is held in each country (Japan and country concerned) respectively. The purpose is to provide with information of each country with respect to regulations and international harmonization issues and exchange the views on WP29 activities. Start with China (CATARC) in 2005, India (MoRTH, ARAI) in 2008 and South Korea (KATRI) in 2013.

10th India and Japan (JASIC) Forum (20th February 2018)

India explained Indian standards align with 119 UN Rs and 8 GTRs and continue to work in reflecting remained 12 GTRs. India also noted they play the great role at WP.29 as 1998 member country. Sharing information on the expected topics such as activity on Automated Driving Vehicle and electric vehicle. India explained activity on Electric Vehicle including the function of six committee for related agenda under each government organization. Japan (JASIC) explained WP.29 movement and Japan's contribution on Automated Driving Vehicle.

12th China (CATARC) and Japan (JASIC) Forum (23rd October 2019)

Regarding on UN Activities for Autonomous, Automated and Connected Vehicle JASIC presented the activities of realizing the automated vehicle technologies and current situation of WP.29. CATARC explained of automated and connected vehicle technology. JASIC also introduces several meetings of WP29/ GRVA (FRAV/VMAD/ACSF/EDR, DSSAD*). Both exchange status in China and Japan in each nation (i.e. demonstration project, current guidelines and regulations) and WP29/GRVA.

For UN Activities for Electric Vehicle Safety (EVS), both exchange the views on WP.29/GRSP EVS in focused points with each position. JASIC delivers the current status and consideration of Japan's proposal of WP29/GRPE EVE regarding on the UN Activities for EVE (Electric Vehicles Environment)

South Korea (KATRI) and Japan (JASIC) forum have no been realized yet because of the busy schedule from both countries.

Report from RACE Meeting

Reported by Mr. Mohd Mazwan Mohd Safwan, MAA

Reported by Mr. Mohd Mazwan Mohd Safwan, the representative from MAA

-The 24th Regulation and Certification Experts meeting (RACE) was held in Kuala Lumpur on 3rdDecember 2019.

-The meeting was attended by the automotive industry representatives from countries in Asia, i.e. India, Indonesia, Japan, Myanmar, Taiwan and Thailand

-There were 2 main contents discussed in the meeting as follows;

1)WP29 activities, Electric Vehicles and Co-operation in Asian Region:

i. Each automotive association reported the latest regulatory movements and issues (e.g. emission and safety regulations and new technologies which related to UNRs/WP.29 activity.

ii. In preparation to the accession to the 1958/1998 Agreement and implementation of UNRs/GTRs, the contributions from related government agency and automotive industry are vital.

iii. Industry are encouraged on any new proposed regulatory to be aligned with UNRs/GTRs. This would create a better environment for the regulatory harmonization to both regulators and manufacturers.

iv.EU, US, Japan, China, Korea, India and some ASEAN countries participated in WP.29 and discussed actively about the new regulations for new technology such as electric vehicles (EVs), automated driving and etc.

v. It would be a mutually beneficial for both government and industry to discuss at WP.29 on how to establish an appropriate regulatory harmonization framework base on different situation of each country.

vi. Members agreed that industries should provide information exchange and cooperation with government of each country.

vii. Some ASEAN country which has not acceded 1958 Agreement is considering signing the ASEAN MRA before acceding to WP29.

viii. The meeting also encouraged ASEAN economies to continue discuss and exchange an information on activities related to safety, emission and EV issue.

2)Encourage harmonization of EV-related regulation:

i. The automotive industry has recognized that the introduction of electric vehicles is an effective way to improve air quality and reduce CO2.

ii. By promoting the expansion of use of electric vehicles, tax rebates and incentives together with introduction of international harmonized regulation are required.

iii. The automotive industry-government collaboration is essential to participate in the formulation of EV policies and proposes the government to provide relevant information at Public-Private forum session, and introduce EV-related international harmonization regulation through WP29.

Report from Parts Industry

Reported by Mr. Tomoki Kuwabara, Member of International Cooperation Committee, JASIC

He presented that the industry's mission is to maximize positive aspect and to minimize negative aspect. JAPIA wants to contribute to achieve the brilliant future. The imagine world has 3 important pillars. First, Adoption of UN Regulations. Second, Standardized Homologation System.Third, International Homologation Activity. The public and private organization is necessary as a foundation. Thanks to this supply of Standardized specification products with safe and reasonable-price can be done. In the future JAPIA expects all countries here will join 1958 agreement. This is our final goal and the Imagine world. JAPIA expects smooth launch of ASEAN MRA. There are 3 points of concerns which is Introduction timing, different interpretation, and test report description. Suggestion to avoid this situation is ASEAN MRA had better be alternative until 10 countries' introduction. In addition, AAC should set target date of the UNR introduction, and disclose the progress to public. Schedule 6 in 1958 Agreement is the procedure for resolving interpretation issues and AAC should consider similar procedure.

The Benefits of the 1958 Agreement on Tires

Reported by Mr. Jun Makino, Member of International Cooperation Committee, JASIC

1.Performance Requirement for Tires

Tire is one of the important vehicle parts for vehicle safety and environment. Tire Performance for Safety are based on dimension, marking, high speed test, endurance test and wet grip. Tire Performance for environment are based on tire noise and rolling resistant.

2.UN Regulations for Tires are Accepted Globally

-Contracting Parties under the 1958 Agreement

-UN Regulations for tires are major regulations in the world and many countries accept UN certification

-Contracting parties under the 1998 Agreement to jointly establish Global Technical Regulation for tires (GT-16). Tire GTR is established based on UN Regulation and other major tire regulations of Contracting Parties under the 1998 Agreement.

3. UN Regulation for Tires for ASEAN MRA and IWVTA

Major Contracting Parties under the 1958 Agreement adopt UN R30, R54, R75 and UN R 117.

4. Necessary Equipment / Facilities for UN Regulations for Tires

In order to start the certification activity for tire regulations, it is necessary to prepare installation of several test equipment/facilities such as mounting/dismounting, air inflation, dimension, drum test, tire rolling sound, rolling resistance and wet grip.

5. The benefit of Accession to the 1958 Agreement

United Nations already established the necessary, suitable and proven regulations for tires.

If new Contracting Party (CP) under the 1958 Agreement is not ready for test facility for certification, CP can start to adopt UN Regulations by

-Mutual recognition of certification which is issued by other CP countries

-Designate the capable test facility as Technical Service and utilize the test report which is issued by Technical Service

In consequence, it is feasible to adopt UN Regulations without the facility investment (can save the initial cost)

6. Tire Industry expectations for future ASEAN MRA

-UN Regulations for Tire Safety (UN R30/R54/R75) will be adopted in ASEAN MRA later, so therefore, the tire industry expects that this will be the good starting point to consider the Accession to the 1958 Agreement.

-If ASEAN Countries would like to amend UN Regulation in order to adjust with the unique condition in ASEAN Countries, each country can raise the proposal or comment in each GR/Informal WG in United Nations, if the country accedes to the 1958 Agreement.

-Japan welcomes the accession by the ASEAN Countries.

Electric Vehicle Session

Keynote Speech by Mr. Keisuke Tamogi, Environmental Policy Division, Road Transport Bureau, MLIT

1. Background

-Air quality has been improved with the gradual enforcement of emissions regulations.

-Current status of Carbon Dioxide Emissions:

*of all CO_2 emissions in Japan (FY2017), the emissions from the transport sector account for 17.9%.

*the emission from all motor vehicles account for 86.2% of the transport sector CO_2 emissions (15.4% of all CO_2 emissions in JAPAN).

-CO_2 emissions from transport sector peaked out in 2001 and have been declining steadily.

-Japan CO_2 Reduction Target comprise of two:

*Mid-term target for GHG emissions to be at the level equal to 26.0% reduction compared to FY2013 (25.4% reduction compared to FY2005) by 2030 (About 1.042 billion t CO_2) and energy source CO_2 emissions to be at the level equal to 24.9% reduction compared to FY2013 (24.0% reduction compared to FY2005) by 2030 (About 0.927 billion t CO_2).

*Long-term target direction to be pursued by Japan under its Global Warming Prevention Plan (excerpt) in view of the Paris Agreement, under the fair and effective international framework joined by all major countries, Japan will lead the international community in order for the major GHG-emitting countries to reduce their emissions in accordance with their capacities and aims to reduce its GHG emissions by 80% by 2050 as the long-term target while concurrently achieving economic growth.

-Next generation vehicles mean highly environment-friendly vehicles such as Hybrid vehicle, Electric vehicle, plug-in Hybrid vehicle and Fuel Cell vehicle in Japan. These vehicles are expected to spread widely so as to address Global warming and air pollution.

-In Japan, next-generation vehicle (mostly HVs) account for about 22% of all new vehicles sold which also includes trucks. This percentage is far higher than the percentages recorded in other major countries.

2. Promoting Next-generation Vehicles

-Measures to promote widespread use of next-generation vehicles are as follows:

*Establishment of standards for emission regulation and fuel efficiency standard are stipulated for each type of motor vehicles.

*Next-generation vehicles is promoted through tax incentives and subsidies.

*International harmonization of regulations (WP.29) related to FCVs and EVs.

3. Conclusion

-Japan has established mid and long-term policy target in view of the Paris Agreement, which stipulates its objective to hold the increase in the global average temperature to below 2°C above

pre-industrial level. It is important to tackle the emission issues of automobiles, in view of both air pollutant and global warming, all over the world. MLIT will contribute to address the environmental problem, not only in Japan, but globally, by making best use of its experience and technology gained thus far.

Status of Safety Regulations on Electric Vehicles

Presented by Mr. Yoshinori Kikuchi, Expert of Electric Vehicle, JASIC

1.Potential risks and UN safety regulations

-Potential risk of electrical power train in EV are electric shock by touching high voltage buses, overheat by excessive current, risks related to unique components and risks related to unique characteristics and operation.

-He explained the history and future plan for rulemaking at UN for EV safety.

2. Safety requirements in UN regulations

i. Electric Shock Protection for high voltage safety requirements in In-Use Situation comprises into two electric shock protection in normal situation and protection in single-fault conditions.

ii. For Post-crash Safety, electric safety requirement shall be evaluated and met after crash test. Specifications in UNRs include protection against electrical shock (high voltage safety), electrolyte spillage (inside passenger compartment: no leakage, outside: not more than 7% (maximum 5L)) and rechargeable energy storage system retention to remain inside REESS boundaries & not to enter into the passenger compartment.

iii. Battery safety item includes vibration, thermal shock and cycling, mechanical shock, mechanical integrity, fire resistance, external short circuit protection, overcharge protection, over-discharge protection, over0temperature protection and emission.

3.EVS-GTR Overview

■ EVS-GTR are the uniform global standards related to electric vehicle safety

Electric vehicle (EV): BEV, HEV, PHEV, FCV, etc.

Safety: Electric Shock Protection, Battery Safety, Operational Safety, Post-Crash Safety etc.

■ Main requirements

<Phase 1>

・Electric safety

Electric shock protection, Post-crash safety, Operational safety, REESS installation, etc.

・Battery safety

Battery test requirements (Thermal shock, Vibration, External short circuit, Overcharge, Over-discharge, Overheating, Over current, low temperature, Gas management, Thermal propagation, Fire resistance, post-crash, etc.)

Adopted at WP.29 in March 2018 and enacted as GTR No. 20. Currently, activities are being carried out to lead to its adoption in the laws / regulations of each country.

<Phase 2>

・Remaining issues from Phase 1

Thermal propagation, Water immersion, Vibration profile, Gas toxicity, high voltage safety, Charging safety, Post-accident rescue safety, Requirements L6 / L7, over currents (new items)

Debate began at an informal meeting in March 2018. The aims are to take effect in 2021.

4. Summary

-At WP29, UN R100 has been established for EV safety. (00- in1997 and -01 series revision in 2011, 0-02 series 2013)

-EVS-GTR Phase 1 has been published as GTR 20 in March, 2018. Related UN regulations i.e. UN R100 and other national regulations will be revised to incorporate specifications in GTR 20. International harmonization among national and regional regulations has been promoted.

-EVS-GTR Phase 2 is under discussion to solve remaining issues from Phase 1. Controversial discussion continues to make consensus among the 1998 agreement countries.

EV Status in Each Country

China

Presented by Mr. Guo Miao, CATARC, China

Definitions of NEV is new energy vehicles, in China, NEV refers to Battery Electric Vehicle (BEV), Plug-in Hybrid Electric Vehicle (PHEV) and Fuel Cell Electric Vehicle (FCEV).

1. NEV industry in China

The number of production and sales volume increased rapidly in the past five years. The proportion of NEVs in the entire auto production is becoming greater and greater, but the exact number is still very low.

By the end of June 2018, the accumulative sales volume of NEVs in China exceeded 2.1 million units. The sales volume of NEVs in 1-6 2018 was 412 thousand units, increasing by 112 compared

to the same period in 2017 and accounting for 2.9% of the total sales volume of motor vehicles. Distribution in terms of type of drive system: PHEV-100 thousand units, BEV-312 thousand units.

In 1-6 2018, the sales volume of new-energy PCs and CVs was 355 thousand units (87%) and 58 thousand units (13%) respectively.

2. Policies & standard system

A policy system has been established to support the regulation, R&D, subsidiary, taxation, infrastructure and recycling of NEV industry.

The NEV standards support NEV industrialization by:

-Standard specifies necessary technical requirements of NEV and its key parts, covering NEV products performance, availability, reliability, and safety.

-Standard provides electricity or H2 energy refill interface which can easily connect to facility and promote large scale application of NEV.

-Standard used for NEV market access, type approval and quality guarantee.

The reasons for developing the NEV standard mostly due to the power train energy supply difference. The REESS, FCS, electric propel power train system, charging, H2 refill, electricity performance, and other relevant to NEV internal character should develop standards. The NEV external character not the same as internal combustion vehicle should be specified in a standard, for instance, electrical safety, battery safety, electrical consumption ratio, H2 escape, and EMC performance. A new standard or revise the standard which may satisfy the NEV standardization needs.

The purpose of standardization should reflect the top-level design of national industrial strategy and policy, meanwhile, it should represent the demand from enterprise R&D, industry, market, or international situation. The standard system of China NEV industry should follow three principles in below:

-The NEV standard system should has moderate of technical level, have advantage to China NEV industry.

-To fulfill the request of manufactory, company, test laboratory, certification organization, government management.

-Have strong influence ability to international standards and regulations.

China NEV standard system construction process spent more than 20 years. In the beginning, China establishes serials of technical research and development project to prove NEV practicability, the first batch standard has been published. In the stage of part industrialization, China released more standards to support NEV promotion, the standard system established. Now, in China, developing NEV as a national strategy, the standards from individual to system, from quantitative to qualitative change, and from domestic to international.

The “China standardization roadmap for NEV” as a tool to interpret the standard system. China has published two versions of standardization roadmap, respectively, in 2017 and 2018.The roadmap categorizes the standards from mess to a system through 4 aspects, that is electric vehicle, interface, infrastructure, and relative. The roadmap is a draft instruction of standard system, it is a schedule of the standardization project plan.

The whole vehicle standard is divided into BEV, HEV, and FCEV.REESS, EDMS, and FCS are the key of the NEV component, the others component contains DC/DC convert, on-board charger, IGBT and so on.NEV’s energy refill include charging and H2 refill, the infrastructure is the fundamental of NEV application.

NEV safety standard is the fundamental and baseline of the industry, it can stabilize the market. Charging and refill infrastructure standard is the precondition of booming development, it will convince the NEV user.FCEV and high-performance traction battery are the relations to high technology, that technology help the industry full of power. Traction battery recycle standard will enhance the resource saving, it is a basic method to harmoniously developing.

3. Key standard

NEV standard has divided into several types. Those standards can be classified due to the standard’s property, object, and purpose. Some of the standard used for NEV type approve.

For vehicles, safety requirement includes general usage, battery, post-crash, and FCEV. For supply equipment, equipment safety requirement and infrastructure safety are needed and important. For the system which combines the vehicle and charging equipment, the connect to power safety requirement should be considered and development.

The battery is the most important sub-system in electric vehicle, it influences the product cost, vehicle performance, and safety. Those standards make the charging able vehicle and charging equipment connection and energy transfer, achieve the interchange. The EMC standards reflected NEV running and electromagnetic environment demands.

The electric vehicle safety attracted the focus of the entire industry. China has developed the three mandatory standards which harmonic with ISO and GTR 20.China was one of the leads and main member of drafting GTR 20.

4. Conclusions

-China has been built the NEV standard system which has basically satisfy the demand of NEV industry.

-The NEV standard system supports the rapid development of industry, so the system is succeeding.

-There were some standard system tools, for examples, the standardization roadmap, key project per year.

-There are also have some gap between China NEV standardization and international or developed country standardization.

-There are lots of standard project under development, the interested party still have to create more dedications.

Malaysia

Presented by Mr. NaimHusni Bin Latiff, MARii, Malaysia

1. Introduction

Background of NAP

SUPPLY CHAIN INTEGRATION - NAP 2006(2006-2009)

Introduced to transform the domestic automotive industry and integrating it into the increasingly competitive regional and global industry network.

INVESTMENTS PROMOTION - NAP 2009(2009-2014)

Reviewed to enhance the capability and competitiveness of the domestic automotive industry.

GREEN AND SUSTAINABILITY - NAP 2014 (2014-2020)

Focused on developing Malaysia as the hub for Energy Efficient Vehicle (EEV)

CONNECTED MOBILITY - NAP 2019(2019-2030)

Enhance Malaysia's automotive industry in the era of digital industrial transformation.

NAP 2019 Framework

The framework of the NAP 2019 is supported by the implementation of NAP 2014 Framework and New Elements (NXGV, IR 4.0 & Mobility as A Service)

Definition of EEV

EEV is defined as vehicles that meet a set of define specification in terms of carbon emission level (g/km) and fuel consumption (l/100km). EEV includes fuel efficient vehicles, hybrid, EV and alternatively fuelled vehicles e.g. CNG, LPG, Biodiesel, Ethanol, Hydrogen and Fuel Cell.

2. EV Regulations & Standards in Malaysia

Passenger Car (Regulated under Road Transport Act):

-United Nations Regulations No. 100

Electric Motorcycle:

-MS 2413: Electric motorcycle (>50 km/h)

-MS 2688: Electric moped (25-50 km/h)

-United Nations Regulation No. 136

Electric Bicycle:

-MS 2514: Electric bicycle (<25 km/h)

EV Battery & Chargers:

-MS IEC 62196: EV Connectors & Inlet

-MS IEC 61851: EV Conductive Charging System

-MS IEC 62660: Li-Ion Testing for EV

-SAE 1772: EU-Type 2

Public Transport

-Electric Bus:

*1 unit under MAI R&D (2018) – MAI own Li-Ion Battery technology

*11 units under NEDO Project in Putrajaya (2016&2017);

*15 units under Sunway BRT Project (2015);

*55 units by Prasarana and Panorama Melaka (2014)

-EV Sharing programme: COMOS project launched in year 2014

E-Scooters (2017):

-400 units for delivery fleet by KFC & Pizza Hut; and

-30 units by PDRM

3.eMobility Development Status

EV Registration in Malaysia (Current)Passenger Vehicle

-32 BEV and 1,779 PHEV in 2016, 25 BEV and 8,287 PHEV in 2017, 11 BEV and 9,252 PHEV in 2018, 39 BEV and 3,737 PHEV in 2019 (as of September 2019)

EV Registration in Malaysia (Current)Motorcycle

-909 in 2016, 1,224 in 2017, 1,578 in 2018 and 1,840 in 2019 (as of September 2019)

4. Electric Vehicle Interoperability Centre (EVIC) Ecosystem

-Benchmarking: Argonne Interoperability & Grid Integration, US

-Proposal for EVIC Test Bed in Malaysia

Korea

Presented by Mr. Tae Yong Kim, KATRI, Republic of Korea

1. Introduction

2017: 3.2millions → 2018: 5.1millions (63% ↑)

EV Market Share: China (230mil, 45%), EU(120mil, 24%), US(110mil, 22%)

EV stock of registered vehicle(1st): Norway (10%, 2018)

Registered vehicle in Korea (2018): 23,202,355 (Pure EV 54,289)

Registered Pure EV in Korea (2018): 54,289 (All EV (HEV, PHEV,…..): 368,650)

Incentives on EV purchase

-Purchase subsidy (Max $16,160)

-Individual consumption Tax Exemption (Max $2,551)

-Education Tax Exemption (Max $765)

-Purchase Tax Parking Fee Discount

-(Over 50%) Exemption (Max $1,190)

2. Policy on Future Vehicles in Korean

Announcement on Vision and Plan to nurture the Country's Automobile Industry by 2030 (19.10.15)

The goal of becoming the world's No.1 Powerhouse in car technology by 2030

Realization of 5-Free Society in Korea: Accident, Barrier, Congestion, Delay, Emission

[GOALS]

(Safety) Road Traffic Death: 3781('19) → Under 1000('30)

(Environment) Greenhouse Gas (30% ↓), Dust Particles(11% ↓)

3.R&D on Double Decker Electric Bus (Completed)

> Development of Body Structure and chassis on Double Decker Electric Bus

> Development of Advanced Vehicle on Double Decker Electric Bus

* Specification: Length 13.0 m * Height 3.995m * Width 2.49m, 70(+1) seats

* Driving distance / 1 charge: 420km, * Battery: 384kWh(6 packs) * Top Speed: 92.4km/h

Development of Modification Technology on eco-friendly hybrid diesel-electric truck for parcel delivery service

> Small Diesel Truck (In-use) → Eco-Friendly Hybrid Diesel Electric Truck

Technologydevelopmentfor e-LCV,with loading capacity 1ton and running distance 250km per chargeEV in KATRI

4. Standards on EV

KMVSS (Korea Motor Vehicle Safety Standards)

> 'Automobile Management Act' Established as of Dec 31, 1986 from 'Road Traffic Act'

> Total 165 articles (consist of 3 chapters): Vehicle (Installation, Performance), Motorcycle (Installation, Performance), Parts Requirements

> (Harmonization) 65 UN Regulations and 13 UN GTRs were introduced into KMVSS (~2019)

EV Safety Rules in KMVSS

> Motor Power (KMVSS Article 111)

- Limitation Tolerance on Maximum power and Maximum average power for up to 30 minutes

> REESS (Rechargeable Energy Storage System, KMVSS Article 18-3)

- Physical Battery Test: Drop Test, Immersion Test, Over-Charge Test, Over Discharge Test, Thermal Exposure Test, Fire resistance Test, External Short Circuit Test

> Electric Safety for High Voltage (KMVSS Article 18-2)

- Check Protection against indirect contact and direct contact

- Check Condition of Pre-Crash and PostCrash

> Electromagnetic Compatibility for Motor and REESS (KMVSS Article 111-2)

> QRTV (Quiet Road Transport Vehicles, KMVSS Article 53-3)

Thailand

Presented by Ms. Jiraporn Kaewkraison. DLT, Thailand

EV Statistics

-Number of new EV registration significantly increased each year.

-76 BEV and 7,629 HEV/PHEV in 2015, 161 BEV and 9,577 HEV/PHEV in 2016, 165 BEV and 11,945 HEV/PHEV in 2017, 325 BEV and 20,344 PHEV in 2018, 420 BEV and 15,366HEV/PHEV in 2019 (as of 1st half 2019)

EEC-Government Policies

-One of EEC (Eastern Economic Corridor) Government policies is new generation automotive industry – start with OEM of battery and powertrain industries for EV.

-Need cleaner system than IC engine and to tackle with PM 2.5 and reduce carbon emission.

Latest Measures-1

Amend DLT's Notification on EV Registration in 2017 to encourage for alternative energy usage:

- revise rated power and min. speed for registration
- set 30 minutes max. power requirement (UNR 85)

Latest Measures-2

-Draft notification on electrical safety for L3 (UNR 136) - Legal Bureau is considering

- Draft notification on electrical safety forM1 &N1 (UNR 100) - AEB, TAIA & TEEI is drafting
- Draft notification on EMC for L3, M1 &N1 (UNR 10) – AEB, TAIA & TEEI is drafting
- Draft notification on net power for & L3- AEB & TAIA is drafting

Latest Measures-3

More investment on test facilities for battery and EV in EEC areas:

- TAI: Thai Automotive Institute, MOI
- TEEI: Thai Electrical &Electronic Institute, MOI
- PTEC: Electrical &Electronic Product Testing Center, under NSTDA, MOST

Test facilities under TAI, aligning with UNR 100 & UNR 136, expect to start the operation by 2020

Conclusion

-Trend of EV is coming.

-DLT, as a regulator concerning vehicle safety and environment, enforce the appropriate requirements to align with UNR as many as possible.

-Not only for consumer safety and industry, but support government policies on new generation automotive product under EEC as well.

End of Session

Day 3

Country Report on Process of Developing Measures Related to Vehicle Safety and Environmental Protection and/or National Rulemaking Procedures and Implementation of Established UN Regulations into National Law

Brunei Darussalam

Brunei Darussalam representative shared the vision of ministry of transport is towards a sophisticated society and excellence in communications for enhancing national competitiveness. The mission is to create a conductive and dynamic environment for sophisticated society to established and sustained hobbling activities in communication and to provide safe, efficient, accessible and secure communications so as to enhance national competitiveness and quality of life in the knowledge-based economy. He also shared about implementation of vehicle safety standard requirement, since 1st March 2016 was a policy to introduced for all imported vehicle which minimum vehicle safety features, which be must equipped with seat belts, head rest, air bag and ABS braking system. For public transportation buses must fitted with Antilock Brake System and fitted with minimum 2 point of safety belts for passenger for the phase 1. Last is environment protection related to vehicles, in 1995 Brunei Darussalam has made it mandatory for newly imported petrol-engine powered vehicles to have a catalytic converter, the first step for us to the protect the environment by reducing emissions of harmful gases such as CO, NOx and HC, all private vehicles aged more than 7 years and above, and all commercial vehicles aged more than 3 years and above are mandatory to go for periodic inspection that one of the requirement to pass the inspection is the smoke tester for both Petrol and Diesel powered engine are tested and In 2016 the Land Transport Departments new policy is to outsource the Vehicle Inspection Centre(VIC) to the car dealers workshop as an appointed Vehicle Inspection Station(VIS) and mainly in Bandar Seri Begawan area, that will be expand to other districts in future.

Cambodia

Cambodia representative shared Cambodia situation, land transport management and road safety and vehicles inspection in Cambodia. First is situation in Cambodia, Cambodia have 15 million people in 2017 and the capital Phnom Penh have 1.5 million people in 2017. Second, he explained structure of ministry of public works and transport, explain data of vehicle registration between 2008 and 2018, vehicles growth rate is 53% for the last 5 years. The overview of road fatalities decreases to 5.3% at 2018 compare to 2017 and most of the cases of fatalities was cause of motorbikes. In total the vehicles inspection in Cambodia have 14 places, explained vehicle inspection system, process and flow in Cambodia. He shared road traffic safety in crash data, motorbike is number 1 in fatality accident, national road safety committee has purpose for implement the national road safety policy and law on road traffic, protect life of the people and prevent damage and loss of property and environment caused by traffic accident and traffic violations. He said Cambodia have law enforcement in helmet wearing, driving over speed limit, overloading, drink- driving, driving license and registration card, none respect to technical specification, none respect STOP sign, none respect of give way and driving in opposite direction.

Cambodia have challenges and improvement in studies on motorbike fatalities, technical support to implement road safety action plans, capacity building on road safety research field, studies to create motorcycles strategy, strict policy on motorbike registration and monitoring and evaluation system. Cambodia has been working hard in order to reduce the road fatalities as well as introduce new legislation and policy to encourage the use of newer and safer vehicle. He added that with the on-going internal procedure to accede to the 1958 Agreement, Cambodia will hopefully be able to become member of WP29 soon will adopted some important UNR to become national regulation.

China

China representative shared about updates of Certification of Auto Products. First, he explained in national strategy to adopted the Certification of Auto Product according to Standard System. Standard System can be 4 types which is Local Standard, Sector Standards, Association Standard and National Standards. National Standards can be mandatory requirement for ensuring people health, security, safeguarding, eco-environmental and meeting the basic need of economic and social management. For voluntary will be requirement that are need to serve basic and generic purpose, support mandatory national standard or play a leading role in relevant industries. In the absence of voluntary national standards, national unified technical requirements within a sector are needed, sector standards may be developed. On local standards is to address local special technical requirements such as natural conditions and customs and for association standards encourage societies, associations and other social organizations to coordinate with relevant market stakeholder in jointly developing association standard as voluntary basis. The Chinese mandatory standard system for automobiles and motorcycles was established mainly by referring to UN regulation. He explained the structure of China National Technical Committee of Automotive Standardization. From 1990s, China started participation of the WP.29 GR activities. China acceded to 1998 Agreement in 2000 and started regular participation of WP.29 Administrative meetings ever since then. The China WP.29 Working Committee (C-WP.29) was established in 2006. C-WP.29 is headed by the Ministry of Industry and Information Technology (MIIT) for the moment and consists of all government authorities and industrial associations related to auto industry. The secretariat of C-WP29 is located in CATARC. All WP29 issues shall be firstly discussed within the framework of C-WP29. Upon reaching consensus on these issues, the Chinese delegation will, on behalf of China, vote at WP29 meetings.

India

India representative shared about updates of Indian Automobile Industry which 2/3 Wheeled Vehicles, Passenger Cars, Multi Utility Vehicles (MUV), Light and Heavy Commercial Passenger and Goods Vehicles, Agricultural Tractors, Construction Equipment Vehicles (CEV) etc. and vehicles business have a great potential. Vehicle Industry is very well supported by Component Industry in India. India also came out with the Automotive Mission Plan (AMP) 2016 where the vision is to be among top 3 in engineering, manufacture and export of vehicle and automotive

component. Traffic situation in India is rapidly growth and it's in line with the development of infrastructure to ensure the safe transport. He also mentions about the regulatory mechanism in Type Approval System which been implemented since 1991. Indian Type Approval administration consist of TA certificates issued by testing agencies, all testing agencies will be notified under rule 126, the standard and requirement are notified under CMVR and approve by Ministry of Road Transport and Highways. India will introduce new regulation on safety provision starting 2019 to 2021 by stages. This new regulation will include Vehicle Recall Procedure, Additional Safety Features for 2 Wheelers, Rolling Resistance, Rolling Sound and Wet grip for Tires Safety Norms for Construction Equipment Vehicles. He also mentions about the setting up model in-use vehicle inspection and certification test center and the end of life vehicles policy is published and implementation plan is still in draft.

Lao DPR

Lao PDR representative shared about the effort toward the harmonization of vehicle regulations under WP29. He shared regarding the existing safety & Environment regulations, certification system on Technical Requirement, Challenge and roadmap. Lao PDR existing vehicle safety and environment regulation like Road Traffic Law (Amen) 2012 Article No: 35 (Amen) Vehicle Safety and Technical Requirement All Vehicles must comply with International safety Regulations and equivalent, Minister's Circular on Vehicle Technical Requirement issued No: 4312/MPTCP, Prime Minister Decree on National Environment Standard No: 81/PM , Fuel Standard 2017 (Ministry of Science and Technology) and National Road Safety Strategy (MPWT) 2020. There are 8 strategic direction and action plans of NRS Lao PDR are Promote the safe system Approach, strengthen road safety Governance & Leadership, Upgrade data, Monitoring and Evaluation System, Tackle Motorcycle safety, Sustain Rider/Driver Enforcement and campaign, Regulate Vehicle Safety Technology, Demonstrate and rollout safe road environment, Invest in post-crash response. He explained on going plan, Develop new Regulation to managing inspection centre in the nation wide, revised the existing decree for managing import and export motor vehicles in Lao PDR, develop motor vehicles law (drafting), conducting data collection on vehicle assembly factory in Lao PDR for automotive product testing centre project and exchange and sharing experience with neighbouring countries on automotive regulations. Fourth, he explained problems and challenges, lack of human resource knows well and expertise on UNECE regulations, uncontrolled the modify vehicle (trucks & buses), human resource and technical support regarding the vehicle safety and vehicle type approval system is urgent to be established and Limitation of governments budgeting. Last, he explained roadmap and action plan from 2018 to 2024.

Malaysia

Malaysia representative shared about vehicle type approval in Malaysia. First, he explained statistic of road accidents, 60% of death from motorcycles, data from 2006 to 2015. Second, he explained Malaysia Road Safety Plan 2014 - 2020, that main focus in risk reduction on motorcyclist and car occupant, Improvement vehicle safety standards and reduction in vehicle

speed. For WP.29 Framework in Malaysia, improvise safety features of motor vehicle, reduction in road casualties and fatalities, harmonization and implementation of UN Regulatory framework, establishment of comprehensive Vehicle Type Approval (VTA) procedure and promote and inculcate vehicle safety concept through E52 UNR certification. There are 2 mechanism of monitoring the continue compliance product through the VTA Conformity of Production (CoP) and product labelling. He also explained about approach of policy decision in Malaysia. He added that Malaysia is a contracting party under forum WP.29 and adopt the United Nations(UN) Regulations as mandatory safety standard for motor vehicle, JPJ as regulator and approval authority in Malaysia to regulate the technical specification of motor vehicle in Malaysia, the structure and framework of domestic WP.29 committee enable both government agency as well as industry to further consult, discuss, propose and yet to approve the United Nations (UN) Regulatory framework including other vehicle safety measures to be implemented in Malaysia and Malaysia road safety plan 2014 to 2020 was initiated in tandem with the implementation of United Nations(UN) Regulatory framework with the ultimate goals to reduce fatalities due to road accidents in 2020 by 50%. As summary, JPJ as Regulator in Malaysia for regulate the technical specification of motor vehicle, enforcement body on motor vehicle and driver and registration of motor vehicle and driver. VTA procedure to confirm the vehicle design have comply with specified standard of UN Regulations before a vehicle registration is allowed in Malaysia.

Myanmar

Myanmar representative shared about process of developing technical regulations concerning the mandatory product certification of motor vehicle parts and also the planning to approach the UN regulation adoption in local Motor Vehicle law. She also shared the stages of automotive industry development according to the Automotive Policy 2019. This policy is to ensure the high quality, safe and secure and less impact to environment. By referring the Myanmar National Road Safety Action Plan (2014-2020) targeting to save many lives by reducing 50% the annual fatalities of road accident during 2014-2020, to make helmets wearing for motorcyclist all over the country, to make sure the seat-belt wearing at least 70 % all over the country and also to eliminate illegal driving. She also adding that Myanmar will establishment of comprehensive Certification of Approval (CoA) procedure to UN Regulation adoption. For way forward, she also mentions regarding the ASEAN MRA implementation will required technical knowledge, experience and international connection.

Pakistan

Pakistan representative shared about overview of Automotive sector in Pakistan. Pakistan have been introduced the Automotive Development Policy (ADP 2016-2021). The objective of this policy is to facilitate higher volumes, investment, competition, quality and latest technology. This policy will balance the tariffs for sustainability of all stakeholder and industrial growth and also to ensuring consumer welfare. The salient features of the ADP are to provide regulatory and

enforcement mechanism for quality safety and standard adopt by WP29. To this day, Pakistan government will be done some progression for sign 1958 Agreement.

Philippines

Philippines representative shared about process of developing technical regulations concerning the mandatory product certification of motor vehicle parts. First, Philippines have existing institutional framework on certification and regulation of motor vehicles in the Philippines, consist of whole motor vehicle unit, emission standards, MV Parts and components and fuel quality. He added about the (Committee on Harmonization of Vehicle Standards and Regulations (CHVSR) will be reactive as a pillar 3 of Philippine Road Safety Action Plan 2017-2022. Second, he explained about Bureau of Philippine Standards(BPS), BPS is the national standards body of the Philippines and-is responsible in developing and adopting, implementing, and promoting Philippine-National Standards (PNS), as mandated in Republic Act (RA) 4109 and tasked to certify products that affect life and safety of consumers, which include among others, motor vehicle parts and components. Third, he explained about process of declaring a Philippine National Standard (PNS) under mandatory implementation by the BPS. Fourth, he explained automotive parts under mandatory certification are pneumatic tires(PNS 25:1994), rubber inner tubes(PNS 34:2000), lead-acid storage batteries (PNS 06:1987), automotive safety glass (PNS 130:1988) and safety belts (PNS 1892:2000]. He said about speed limitation devices, that to be included in products under mandatory certification of BPS pursuant to Republic Act 10916 or the "Road Speed Limiter Act of 2016". Last, he explained mandatory implementation of a certain standard(PNS), a standard or PNS is declared mandatory through the issuance of a Department Administrative Order (DAO), meeting with the industry and other stakeholders is conducted to discuss the prepared DAO and its Implementing Guidelines(IG), DAO is approved by the DTI Secretary and the standards conformity division of BPS operates its product certification activities based on such technical regulation.

South Korea

South Korea representative shared about overview of Korean Road Transport, activities in WP.29, status of harmonization with UN R/GTRs and plan and progress on amending KMVSS in 2018. First, she explained overview of Korean Road Transport, South Korea have vehicle registration 23.2 million units (2018), road traffic accidents 255,407 times, that Fatalities 3,781 persons (2018), -2.5% comparison of 2017 (4,185). Korean automotive industries have produced around 4.1 million automobiles in 2018,1.5 million for domestic uses and 2.5 million for export, the number of imported automobiles has sharply increased from 0.16 million in 2013 to 0.32 million in 2018, almost 2.0 times increase. Second, she explained about activities in WP.29, South Korea participation in WP29 plenary meeting and 6 GRs and participation in 17 informal working groups (as of Oct 19). She added that, Korea has been chosen to be Chairmanship for GRSG (Panoramic Sunroof Glazing IWG), GRSP (Deployable Pedestrian Protection System) working group and Vice-chairmanship for GRPE (vehicle interior air quality) and GRSP (HFCV) working group. The

main activities in WP.29 are improve UN GTR No.6 on safety glazing for ensuring panoramic sunroof safety, developing test method for deployed pedestrian protection system, developing UN GTR No.13 phase 2 (HFCV) and developing automatically Commanded Steering Functions (ACSF). At last presentation, she shared about the status of harmonization with UN R/GTRs, that totally, 65 UN regulations and 13 UN GTRs were introduced into KMVSS, she shared plan and progress on amending KMVSS in 2019, South Korea plan to amend KMVSSin2019 (7 items).

Thailand

Thailand representative presented on policy and related act on process of developing measures related to vehicle safety and environmental protection. He shared about national regulations under Motor Vehicle Act 1979 amendment/draft technical regulations by adopting UN Regulation was the first priority. The amendment focused on L3, M1, N1 vehicles categories and set UN Regulations for those vehicle classes for registration specified in MR2551. Under the Ministerial Regulation No. 9 (MR9) on Land Transport Act 1979 was revised 3 times within 8 years to add more vehicle parts and performance for ensuring vehicle safety. He explained that MR9 is a set of vehicle parts/system, mass, dimension for bus and truck. Enforced notifications process to align with relevant UNRs with some adaption is currently in progress. Lastly, he explained the timeline of the signed/ enforced notifications under both acts.

Vietnam

Vietnam representative presented current situation on vehicle safety and environmental protection in Vietnam and actions of Vietnam. First, he shared about situation vehicle safety and environmental protection in Vietnam, Vietnam have 96 million persons and have 59 million vehicles. In 2018 have 8,248 fatalities, 14802 injuries and 18736 accidents from road traffic accidents. He said that, the situation on road traffic accidents are serious in Vietnam, almost fatalities are young and in working ages, root causes of this road crash are identify the quality of vehicles, infrastructures, driving drunks, consciousness traffic. The current situation of vehicular pollutions by 40% from industry, 33% from civil construction and 22% from transport. Last, he explained actions of Vietnam to reduction of the fatalities and injuries to 5 -10% and as well as Improve the environmental protection. He shared about legal documents related to vehicle safety and environmental protection, national regulations (QCVN) and national standards (TCVN) related to UN Regulations. He shared about Vietnam register testing facilities, consist of motor vehicle testing center, emissions laboratory and proving ground. Vietnam have improved, invest to build infrastructure and signal transport systems and develop the public transport vehicles and encourage to use the E-Vehicle. As conclusion of Vietnam CR is the vehicle safety and environmental protection is the most important international target in Vietnam, relate to quality of vehicles and certification systems ; the vehicle certification system could ensure that new vehicles and components meet the national mandatory regulations on safety and environmental protection. In order to improve the Vehicle Type Approval system, some improvement in testing facilities, laboratories and manpower need to be done. Vietnam also encourage experience

sharing among the AMS for harmonize vehicle certification system MRA under framework 1958 Agreement will be benefit among the ASEAN.

Chinese Taipei

Chinese Taipei representative presented progress report on vehicle regulation harmonization. First, he shared about amendment and revision as considering UN Regulations, that review twice a year and proposal by any interest group after discussion with the industry player. For the periodical review, he shared 4 regulations on GRRF and GRB was reviewed in the second half of 2018 that including tire, dynamic braking, brake assist systems, electronic stability control systems, steering equipment and speed limitation devices. On the 1st half of 2019, there will be amendment /revision done on GRSP such as the seat belt, belt anchorage, AECS, Seat strength, protection of the occupant in the event of a lateral collision and also hydrogen fueled vehicles. At last, he also mentions the planning of introducing more UN regulations to be amendment.

Closing Remarks

Mr. Ir. Mohd Yusop Bin Mohamad closed the 10th Public and Private Joint Forum in Asian Region.

End of Session