AEC External Cooperation

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April 02, 2026

Automotive Electronics Council
Component Technical Committee

Chinese Standardization Development

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AEC RW Detroit - April 2026

Automotive Electronics Council
Component Technical Committee

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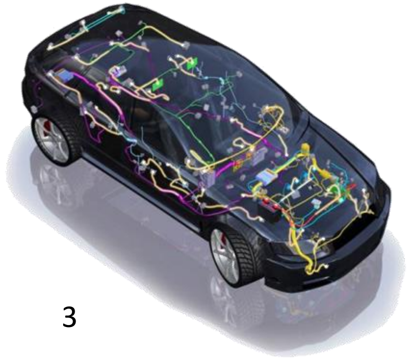
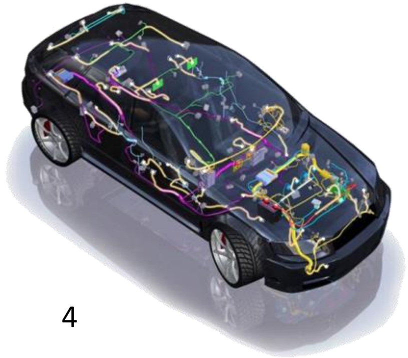


Motivation

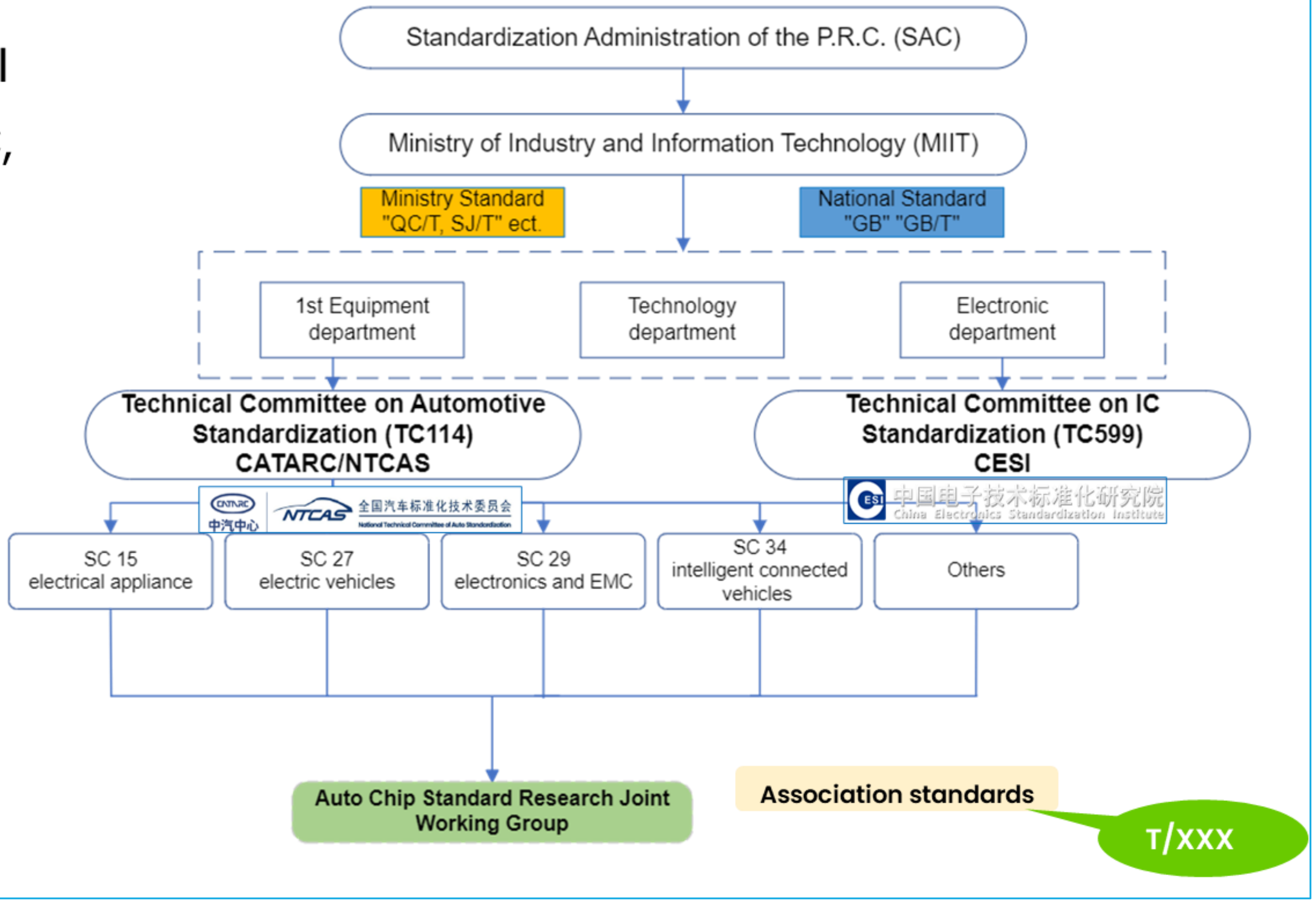
Why is this important for AEC?

- **AEC has observed that for the creation of Automotive National and Industry Standards in China, contents from various AEC standards are being used and translated, while breaking the coherence between those standards.**
- **This means that by the time the GB(/T) documents will be published the content may already be out-of-date. Therefore, "transparent referencing“ is a must.**
- **Therefore, AEC proposed to meet with a delegation of SAC/TC599 to discuss how to build a working relationship.**
- **Objective is to define an approach that assures exchange between AEC and the SAC/TC599 as well as technical alignment.**



Automotive Semiconductor Standardization Stakeholders

- National and industry standard players: CESI, CATARC/CASRI, CEPREI
- Association standard players: NEVC, CACA, CACC, CAAM, CESA, CSAE, CAICV etc.



Standardization Administration of the P.R.C. (SAC)

Ministry of Industry and Information Technology (MIIT)

Ministry Standard "QC/T, SJ/T" ect.

National Standard "GB" "GB/T"

1st Equipment department

Technology department

Electronic department

Technical Committee on Automotive Standardization (TC114) CATARC/NTCAS

Technical Committee on IC Standardization (TC599) CESI

SC 15 electrical appliance

SC 27 electric vehicles

SC 29 electronics and EMC

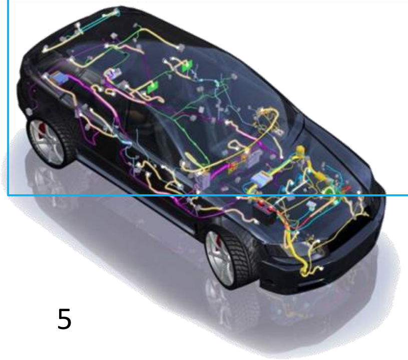
SC 34 intelligent connected vehicles

Others

Auto Chip Standard Research Joint Working Group

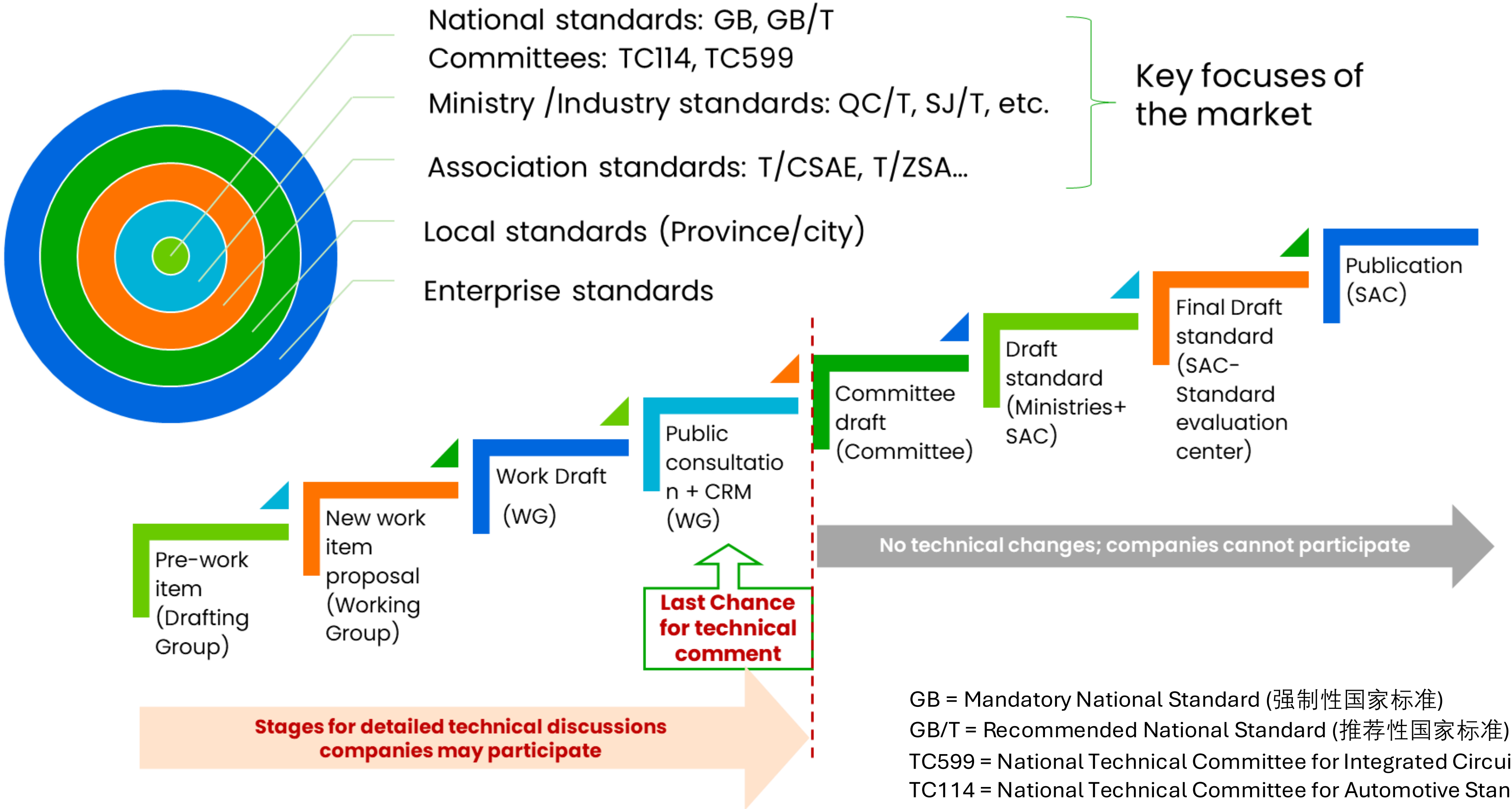
Association standards

T/XXX



Courtesy Jane Li, Technical Regulatory Senior Engineer @ NXP

Standard Creation & Publication



National standards: GB, GB/T

Committees: TC114, TC599

Ministry /Industry standards: QC/T, SJ/T, etc.

Association standards: T/CSAE, T/ZSA…

Local standards (Province/city)

Enterprise standards

Key focuses of the market

Pre-work item (Drafting Group)

New work item proposal (Working Group)

Work Draft (WG)

Public consultation + CRM (WG)

Committee draft (Committee)

Draft standard (Ministries+ SAC)

Final Draft standard (SAC- Standard evaluation center)

Publication (SAC)

Last Chance for technical comment

No technical changes; companies cannot participate

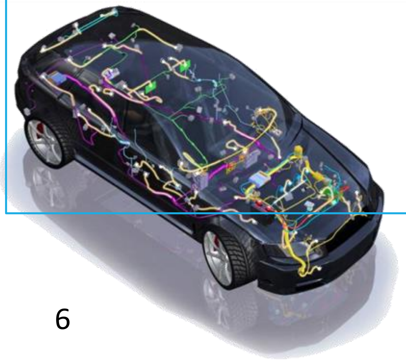
Stages for detailed technical discussions companies may participate

GB = Mandatory National Standard (强制性国家标准)

GB/T = Recommended National Standard (推荐性国家标准)

TC599 = National Technical Committee for Integrated Circuits

TC114 = National Technical Committee for Automotive Standards



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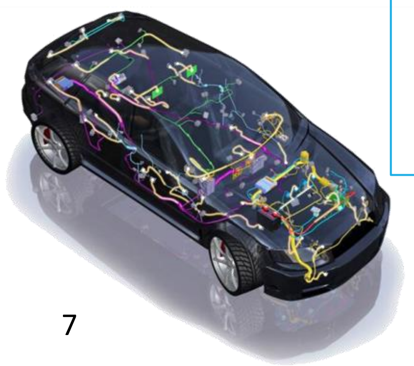
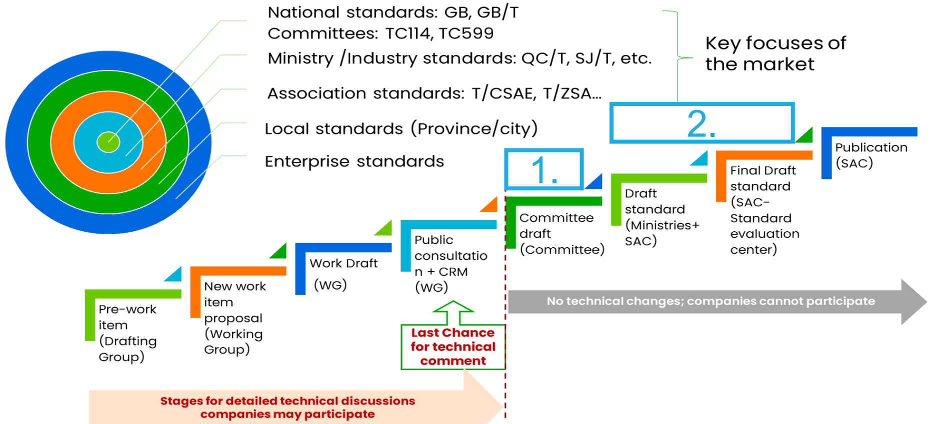
Status & Outlook: Product Quality/Reliability Standards

Current status China standards	➢ TC114 (Auto STD – Most members are Car OEMs and T1s) 1. • [201-1]* General specification for environment and reliability of automobile chips • Reliability requirements & test methods annex in product standards: EV BMS AFE, control chip, CAN/LIN, PHY, Switch… ➢ TC599 (IC STD - Semiconductors) *(CN Counterpart of IEC TC47 D,F)* 2. • [201-2] Stress testing requirements of automotive integrated circuits • [201-3] Stress testing requirements of automotive discrete devices • [201-6] Stress test qualification for automotive multichip modules (MCM) * Standard category label in CN national auto chip standard system
Comparison to International standards	• TC114 – "201-1" referencing TC599 "201-2, 3, 6" directly; some industry standards incorporating AEC Q100, JEDEC/IEC, AQG324 etc. with proposing test methods may deviate and new test items (e.g. LTSL, LTOT, LTOL for power modules) • [201-2] adoption of AEC Q100 – copyright issue • [201-3] adoption of AEC Q101 – copyright issue • [201-6] adoption of AEC Q104 – copyright issue



National standards (GB/T):

1. 201-1: ~ committee draft stage (public consultation in Feb 2026)
2. 201-6:~ final draft stage **Trigger for AEC to reach out to TC599** (public consultation in Aug 2024). 201-2, 3: ~ draft standard stage (public consultation in Aug 2025).



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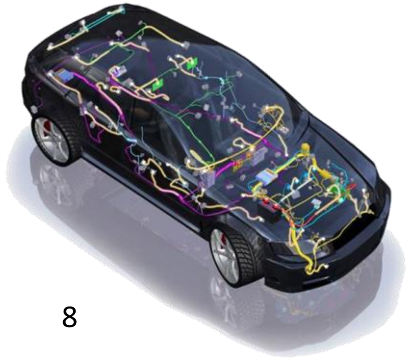
AEC Strategy

Status of Contacts with TC599 - Summary

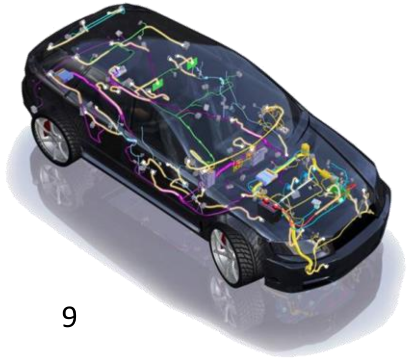
- **After AEC sent a letter to TC599 to invite for a discussion on potential collaboration, two meetings have been organized.**
- **Ways of working on document creation, receiving inputs, document approval process and publication have been exchanged.**
- **In the last meeting a list of questions from TC599 was discussed (refer to slide 9):**
  - To formulate the AEC response, we will reach out to the technical leads of the various standards.
  - In next meeting (most likely early May), we finally will discuss how we can co-operate on creating / maintaining standards.



AEC Strategy

Status of Contacts with TC599 - Participants

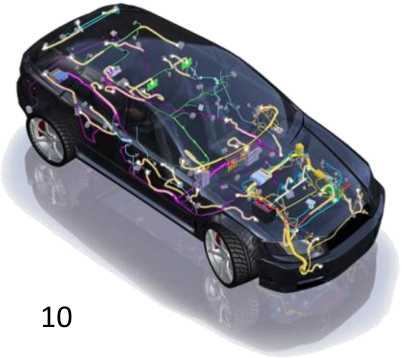
Name	**Organization**
Yanghuichen Lin	*TC599 Contact*
Qiu Zhang	*TC599 Secretary*
Yin Mengdi	*TC599 Automotive Reliability Standards*
Nan Jiang	*TC599 CESI*
Mike Buzinski	*AEC-chair / Microchip*
Rene Rongen	*AEC-vicechair / NXP*
Ulrich Abelein	*AEC-executive committee / Infineon*
Bassel Atala	*AEC-executive committee / STMicroelectronix*
Maurice Brodeur	*AEC-executive committee / Analog*
Carsten Ohlhoff	*AEC-executive committee / Aumovio*
Zhongning Liang	*AEC-executive committee / NXP*
Meng Tian	*AEC-member / Gigadevice*



AEC Strategy

Status of Contacts with TC599 – Questions to AEC

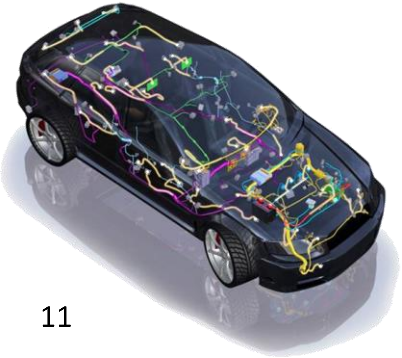
- **What is the AEC roadmap in terms of adding other BLR test methods (AEC-Q007 - next to BL TC)?**
- **Regarding MEMs (AEC-Q103 series): What is the AEC roadmap for these standards? There seems to be particular interest in a standard for accelerometers.**
- **Concerning SiC and GaN (Wide Band Gap): Please share the most recent time schedule on both standards (that will be appendices to AEC Q101).**
- **Regarding AEC-Q101 (Discretes): A couple of comments and questions to AEC-Q101 were raised by TC599; a complete list will be shared with AEC for comment.**



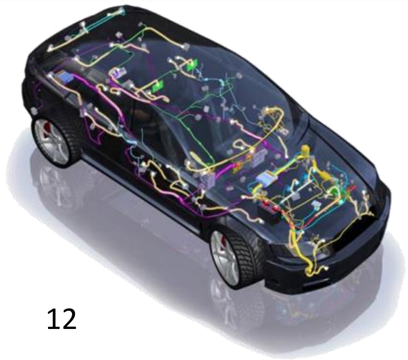
AEC Strategy

How to proceed?

- **Concerning TC599: discuss co-operation and exchange roadmaps.**
  - This implicitly means that AEC needs to make a roadmap; as we currently do not have it.
- **Concerning TC114: initiate a similar discussion.**
- **Overall key topic: avoid "conflicting requirements" in documents published by AEC and TC599 / TC114.**
- **Request: we need volunteers from AEC member companies that are also active in TC599 / TC114 to join an AEC Task Force around Chinese Standardization Activities when it comes to technical discussions around specific standards/ topics in near future.**



AOB and Q&A



AEC - European OEM Interface

Ulrich Abelein - Infineon

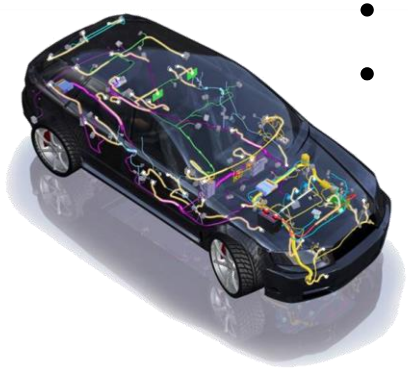
AEC – OEM Collaboration

- **OEMs as one of the main stakeholders of AEC documents are regular guests and presenters at both US and European Reliability Workshops**

- **As consultants OEMs also contribute successfully to AEC standards development.**
  - AEC-Q006, WBG, Extended Mission Profiles

- **European OEMs approached AEC with the explicit ask for a regular exchange on standards development and needs by the industry**

- **2025 we established a regular meeting between AEC and OEM representatives**
  - Participating OEMSs: Ampere, Audi, BMW, Volkswagen, Volvo
  - Format: two meetings per year, spring and fall, one hybrid, one virtual
  - Recent topics (selected): WBG, extended mission profiles, chiplet qualification requirements



AEC – JEDEC / ESDA Interface

Mike Buzinski - Microchip

JEDEC / ESDA MOU Agreements

- **AEC is revising our JEDEC MOU to allow restricted sharing of draft documents**
  - Will allow standards with similar topics to remain compatible

- **AEC is in contact with AEC and plans on creating an MOU to allow sharing of draft documents and collaboration on joint standards**

AEC - US OEM Interface

Mike Buzinski - Infineon

AEC – US OEM Interaction

- **COMMENTS (during discussion)**
  - AEC is open to having discussions like the meetings with EU OEMs if contacts can be identified
  - James McLeish has committed to looking into defining these contacts

Q & A