

CHADeMO Meeting in Farmington Hills, MI on January 14, 2011

SAE/IEC Status, 2011 Schedule, challenges and opportunities –Serge Roy

- Serge Roy, project leader of IEC PT61851-23 and PT61851-24 and a TEPCO consultant, presented the SAE and IEC status.
- At IEC Japan proposed 3 new work items for DC charging. They were all accepted. German and US OEMs have proposed an hybrid connector.
- IEC documents treat DC charging as a system while SAE documents stop at the PEV inlet. Also at least 3 SAE documents are required to do DC charging.
- IEC DC charging documents are scheduled to be published by the end of 2012. While SAE is planning to publish its hybrid connector by July 2012.
- The evaluation of the hybrid connector versus the CHADeMO one will happen in July 2011. The CHADeMO association needs to draft a comparison criteria file.

CHADeMO Certification and Specification 1.0

- CHADeMO charger manufacturers in US are:
 - AV, Aker Wade
 - Eaton and eTec
- Present certification procedure needs an EV. Find below the certification procedure:
 1. Receive CHADeMO specs
 2. Questions and Answers
 3. Design work and prototype
 4. Application for certification by submitting schematics to CHADeMO.
 5. Self-checking before certification test
 6. Certification test
 7. Pass or Fail
- The application form, the self check items, the test items have been presented.
- Future certification will introduce a test bench. No EV will be needed for this test.
- Expecting certification test to be completed within one day.
- The test bench pictures have been presented.
- Question: Do we need new operation and or organization to run certification?
- Answer: ???
- CHADeMO needs feedback from its members to improve the present version 0,9.

- CHADeMO 1.0 future topics are
 - EMC, emissions and immunity, RF interferences
 - Sequence circuits, overvoltage and lightning surge protection issues, and CAN messages timing.
- Companies up to now have been certified to the 0.9 version.
- Question: Do you have a CHADeMO sticker on EV?
- Answer: Not now but Nissan and Mitsubishi EVs will have them.
- Maitra from EPRI: Will AV and Aker Wade be UL certified?
- Answer: They got the CHADeMO certification but they need to get the UL certification.

CHADeMO North America Organization and Communication

- CHADeMO is an open protocol. Current proposal is practical.
- Local people can work with local governments. Thus, Europeans have agreed to form a steering committee to lobby and communicate.
- Question: Are North American CHADeMO members interested into forming a steering committee?
- Answer: Not at the moment.
- TEPCO is just a moderator within the CHADeMO association.
- TEPCO would like to hear more from stakeholders.
- 500 commercial stations are already operating in Japan. We need to promote more station in North America.
- CHADeMO North America did not commit to form a steering committee.

Automakers Perspective and Business Plan for 2011

Nissan

- Nissan formed 26 partnerships with cities, states, utilities to promote EV market readiness.
- Nissan is a participant in the DOE EV project led by ECOTality. It's a \$230 million project.
- Nissan will deploy 5,700 LEAFs in the DOE EV project. 6,250 level chargers and 310 DC fast chargers will be built.
- Nissan will provide data from the LEAF telematics system to support the DOE EV project.
- Question: Is it easy to install DC Fast chargers?
- Answer (from eTec): It is not easy because of local county involvement.
- Question: Can the EV project data be shared with public?
- Answer: Yes. The EV project data will be managed by INL???

Mitsubishi

- Mitsubishi Motor Corporation (MMC) will introduce the iMiEV in US by Nov. 2011.
- The Corporate environment target is to reduce CO2 emission by 50% and increase the EV and PHEV ratio to ICE to 20% by 2020.
- MMC environmental flagship has changed from “Sporty & Toughness” to “Green & Sustainable.”
- The iMiEV will be introduced in US with a 16kWh Li-Ion battery operating around 330V nominal. Its driving range will be 85 mile based on the LA4 driving mode.
- The US launch of the iMiEV is planned for Nov. 2011.
 - Phase 1: West coast states (CA, OR, WA) and Hawaii.
 - Phase 2: North East States (Maine, NY, NJ, NH, CON, NC, etc.)
- The iMiEV will be available nationwide 1 year after its launch.
- MMC has partnered with Eaton and Best Buy.
- MMC has installed 80 Fast Chargers at MMC dealerships in Japan. MMC is considering the same figure for US dealerships.
- Question: Are any iMiEV planned for TN during its launch?
- Answer: No plan for TN for the launch.

Magna

- Magna E-car systems have in North America
 - Electric hybrid vehicle programs
 - Battery packs and testing
 - Battery cell development
- Magna production programs are:
 - 2011 Ford Focus BEV
 - 2011 Mercedes eVito Van
 - Volvo truck
- Magna E-car interest in CHADeMO:
 - Magna joined CHADeMO to get more info on the only available DC fast charging system.
 - Magna is looking for universal, and common charge interface that provide the ability to charge quickly.
- Magna E-car system Fast charger will be installed very soon at its Michigan office.

Connector Makers Perspectives

Yazaki

- Yazaki new DC connector version has the following specs:
 - Rated current and voltage: 120 Amps and DC 500 V
 - Lever assisted, temperature range: from -40C to 60C, capable of 10,000 mating cycles, pins are finger proof
 - Certification was done in Aug. 2010, conforms with UL 2251, passed the drive over test
- The new connector got updated from aluminum case to plastic case. Seals prevent water entry into terminal crimping area.
- Lead time to supply DC fast charge connector can be shorten from 8 weeks to 4 weeks. For more information refer to the link below.
www.yazaki-na.com/uploads
- Consumer experience to the new connector looks good.

Power Company's Perspective

Portland General Electric

- Over 50 charging stations are installed in Oregon. 60% of the stations have been upgraded to J1772™.
- Oregon has the only North American available public DC quick charger station.
- 40% of the stations are powered by 100% PGE renewable energy.
- The changes in infra expected in 2011/2012 are:
 - Residential: 1,000 Level2 chargers with 800 from the EV project
 - Public/Business: More than 1,400 Level 2 chargers with 1,000 from the EV project.
 - Fast Chargers: 80 with 50 from the EV project
- On Aug. 5, 2010 NEC and PGE announced the installation of the first DC fast charger in North America for public use.
- PGE is building the Northern section of the I-5 West Coast Green Highway. It is 600 miles long. RFP was issued by Oregon and Washington DOT. It is due January 24, 2011. Construction to be completed in fall.
- Question: Are your DC stations certified?
- Answer: Yes, they are certified by local certification bodies.

Plan for Next Meeting

- Question: Are the CHADeMO meeting helpful? How often should we meet?
- Answer: Yes they are useful. We should meet every 3 months.
- Planning to meet in April during the EDTA conference in Washington DC on April 19 to 21, 2011. To be confirmed by the CHADeMO secretary.
- Note that CHADeMO is having its annual meeting in Tokyo on April 26, 2011.
- CHADeMO is working with Google to put their station locations on Google map. Please send any information you may have to the CHADeMO secretary.