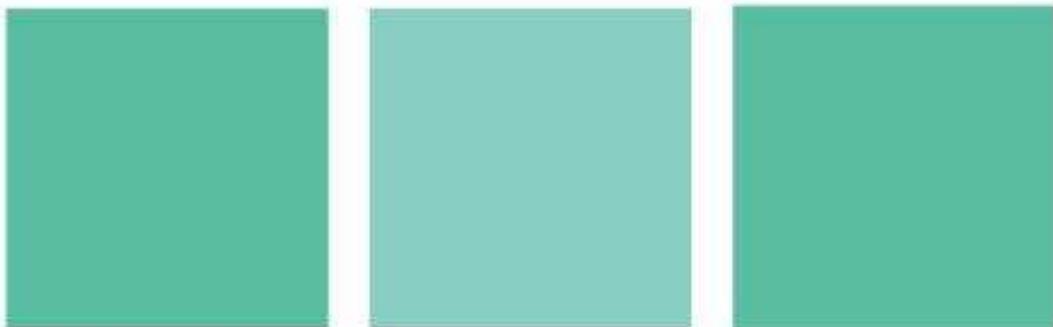
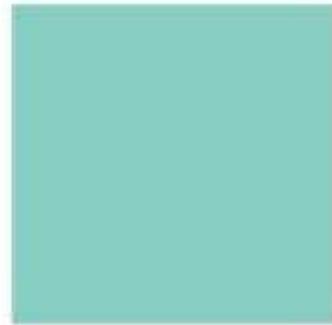




CHAdemo



2016
Activity Report
(1 April 2016 ~ 31 March 2017)



CHAdemo Association

From the President



First of all, I would like to express my sincere gratitude to all our members for their continued support for our electric vehicle and fast charger promotion activities.

CHAdeMO Association was established in March 2010 and, how time flies - it is now our eighth year. Looking back on FY 2016, it was a year that charging infrastructure evolved in both quality and quantity.

In terms of volume, the number of CHAdeMO-compatible electric vehicles has grown to over 400,000. This growth has been accompanied by steady progress in charging infrastructure network development, with the number of CHAdeMO chargers approaching 14,000 units globally.

With regard to quality, we have been developing higher power chargers in consideration of future range expansion for electric vehicles. In March this year, we issued the CHAdeMO protocol ver. 1.2 and established the technical standard for realising 150 kW charging, which represents three times' higher power than conventional charging. At the end of March, in Ise City, Mie Prefecture, we conducted a high-power charge demonstration, which was the world's first using actual vehicles and chargers at this output level, and the advanced CHAdeMO technology was recognised by a wide range of journalists, government officials and other participants.

In addition, we have made steady progress on the standardisation of the CHAdeMO specification, which is one of the pillars of the Association's activities. For the charging standards, we have enhanced the certification system and been working towards future geographic expansion in Japan, the U.S., Europe and emerging countries through our open platform strategy with a reliable certification system as its core. The quality and reliability of the system can be a strong driver for further infrastructure deployment. In order to widely disseminate the certification system, we have developed a compact and affordable testing device and have already received orders from countries including the U.S. and India. We hope that this will accelerate the further dissemination of the CHAdeMO standard and electric vehicles globally.

For our organisation, a year has passed since we became an incorporated association

last June with the objective of securing sustainability in CHAdeMO activities. The number of members increased along with the number of times we participated, as the CHAdeMO Association, in government-led discussion groups. We believe that this is a sign of the confidence CHAdeMO has won.

We will continue to make our best efforts in the further development of electric vehicles and charging infrastructure, promoting CHAdeMO through sharing information with e-mobility stakeholders and beyond. I look forward to your continued understanding and strong support for our Association.

Toshiyuki Shiga
President
CHAdeMO Association

Technical WG Activities

The Technical Committee has set up three WGs, focusing on the revision of CHAdeMO specifications for expanded functions, including high-power output, as one of the main targets for FY 2016 and the development of a certification system corresponding to the revised specifications.

Specifications WG

In the Specifications WG, three SWGs were set up to continue the function extension study for 150kW-class high current, according to the high-power roadmap.

In revising the specifications, we paid special attention to early-stage information sharing with the members and their feedback regarding requirements for high current and multi-outlet chargers, given the strong requests from our European members, where high-power commercialisation is prominent. For this, members' feedback was collected three times, the most frequent in specification revisions thus far. Furthermore, after issuing the 2nd draft, multiple briefing sessions on it took place for various time zones including Europe, North America and Japan on 4 and 7 October, in order to share in detail the situation regarding technical issues. Following this, standard specification ver. 1.2 was finally published on 24 March 2017.

Self-diagnostic function SWG

We examined the self-diagnostic function of ground fault detectors, one of the main component supporting the safety design of CHAdeMO, which was a technical issue carried over from the previous year. As a result of four deliberations, detailed study results were reported in the revision proposal, including diagnostic circuit examples, monitoring functions and timings to avoid mutual interference with the vehicle-side charging trial sequence.

Protection coordination SWG

The Protection coordination SWG was set up for deliberation focused on the appropriate design of protection functions to prevent overcurrent/short circuit current between vehicle and charger, for higher currents.

Technical points such as the below were discussed and the SWG concluded that there was no risk of safety problems in these cases.

- ✓ Coordination of timing between current-limiting fuse and overcurrent protection
- ✓ Possibility of errors due to the combination of vehicle and charger, where one is compatible with high current control and the other is not

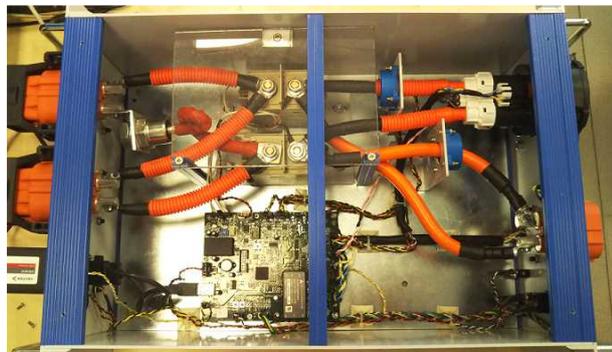
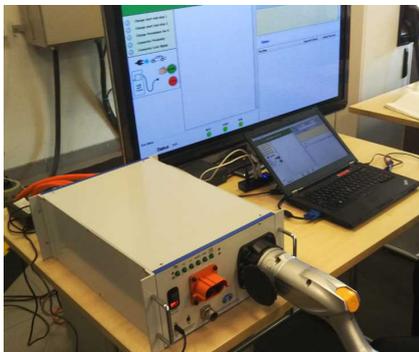
Connector SWG

For countermeasures against over-temperature caused by high currents, fundamental improvements are required for connectors and cables. The Connector SWG issued performance confirmation ver. 1.2 by adding new confirmation items such as temperature monitoring and temperature rise suppression functions corresponding to the revised specifications.

Certification WG

The Certification WG continues to hold consultations with the certification bodies so that the CHAdeMO certification and V2H certification tests can be performed smoothly. In FY 2016, the Certification WG mainly conducted the following three activities:

- ✓ Advanced preparations for the ver. 1.1 certification; applications accepted from July 2016
- ✓ Defined the test items for additions and modifications to the certified chargers, which required a re-certification test, and revised the certification guidelines reflecting the allocation of V2H/L certification test items
- ✓ Proceeded with the development of a new, inexpensive and general-purpose testing device (see photo) that can be handled by both certification bodies and manufacturers



V2H-WG

Since issuing the certification criteria and self-declaration in December 2015, more manufacturers have become involved, advancing product development for V2H/V2L systems. The V2H WG responds to enquiries and applications for certification both in Japan and overseas. Third-party tests using the protocol tester were offered in FY 2016 and the first product was certified in March 2017. From FY 2017 onwards, the V2H WG plans to use a new type of certifier and revise the guidelines on which it has continued to work for the past few years.

Since a V2H system needs to work together with energy management systems (EMS) and electric power systems, the V2H WG is also studying the information transfer

interface with the host system. The standard specification of CHAdeMO defines the interface between EVSE and the vehicle and the interface with the host system is designed in such a way that it can flexibly accommodate the needs of each country and region.

In Japan, CHAdeMO Association has participated, as an observer, in the Energy Resources Aggregation Business (ERAB) meetings held by the Agency for Natural Resources and Energy. In the ERAB meetings, system structure and interface definition to optimise the remote control of energy resources (PV, storage batteries, EV etc.) on the customer side have been discussed. Mr Kitahara, Head of the CHAdeMO V2H-WG, participated in the ECHONET Lite WG of the ERAB working group on the use cases utilising EVPS.

Meanwhile, the IEC has started standardisation activities concerning network management for charging infrastructure. We continue to contribute to the widespread use of CHAdeMO through participation in various standards meetings and demonstration projects.

In Japan, the commercialisation of V2H systems is well advanced. In order to examine the interpretation and configuration of relevant laws and regulations associated with interconnection to the power grid, we have entrusted the preparation of the "Charge/Discharge System Installation Guide", which complements the published V2H guidelines, to the Institute of Electrical Installation Engineers of Japan and issued a report. This will be formally published after a decision on whether or not to continue deliberations on some technical items has been taken.

Public relations activities

Promotional activities abroad

In North America, in response to the publication of CHAdeMO-compliant DC charging standard IEEE 2030.1.1 in March 2016, we launched a project aiming to formulate a common compliance test with CHAdeMO certification and we are currently recruiting members for its steering committee. In parallel, with the completion of the new testing device, we plan to begin the UL-based certification tests in North America in FY 2017.

In China, we collaborated with government agencies and the Electric Vehicle Charging Infrastructure Promotion Alliance (EVCIPA) to share know-how and jointly resolve technical issues. We intend to continue these technical exchanges in the future.

In Europe, at CEBIT 2017, held in March 2017, the Japanese and German governments announced a joint agreement, the "Hannover Declaration", which encompasses a broad range of Japan-Germany cooperation on the Internet of Things (IoT) and Industry 4.0. It also includes the charging infrastructure domain. CHAdeMO Association has been participating in the Japan-Germany Next Generation Charger Standard Consultation under the guidance of both governments. The Declaration took into careful consideration the outcomes of ongoing activities and the future direction.

On 30 March, shortly after the announcement of the Declaration, a Japan-Germany Joint Technical Working Group was held in conjunction with the high-power charge demonstration and the members discussed potential areas for future technological cooperation.

In India, in preparation for their EV dissemination plan, the Government is working to define national standards and establish a certification system for the charging infrastructure that leads to the nurturing of domestic industries. CHAdeMO Association supports this initiative by sharing knowledge from our dissemination activities and the maintenance of our certification system.

Charging standards and acceleration of EV adoption are being investigated in other Asian countries, including South Korea and Thailand. CHAdeMO Association has been active in its PR activities to communicate the advantages of CHAdeMO.

High-Power Connection Test/Demonstration Meeting

On 28 and 29 March, we held a connection test event for high-power charging at UL Japan headquarters in Ise, Mie prefecture. Five car manufacturers (Nissan, Mitsubishi, Tesla, Isuzu and a German OEM) and three charger makers (SIGNET, DELTA and BTC Power) participated, conducting a connection test with the maximum current of 300A. The high-power charging was confirmed to be successful in almost all combinations.

Issues found during this test will be summarised and reflected in the future specifications and certification guides.

Together with the equipment test, a demonstration test of a new testing device was conducted by the stakeholders on 29 March. The test was conducted by connecting the new device to chargers and verifying the current and signal analysis behaviours.

On 30 March, we invited media companies such as TV and newspapers to a demonstration of high-power charging and exhibition presentation for V2H equipment as well as the new testing device. CHAdeMO's advanced functions and internationalisation efforts were presented and numerous individual interviews and photo sessions were set up by the members of the media.



Other activities for EV diffusion

In Japan as well as in the international community, promotional activities organised by local governments are being seen more and more and an increasing number of technical symposia and exhibitions are being held to communicate the attractiveness of electric vehicles and charging infrastructure.

We speak about our experiences and current status to contribute to the popularisation of electric vehicles and charging infrastructure, making full use of regional characteristics. For example, this year we have spoken at such places as an EV/PHV Town Study Meeting composed of METI and municipalities, the Osaka Next Generation Vehicle Promotion Council and the E-KIZUNA Project organised by Saitama City.

In addition to these, we participate in other conferences and exhibitions as speakers or exhibitors, while receiving guidance from academic experts.

In FY 2016, we exhibited and gave a presentation at EVS29, a renowned international EV conference, held this year in Canada. We did likewise at eCarTec in Germany and spoke at the SAIT EV symposium and FAME workshop in India, iEVTech conference in Thailand and EVTeC and EVEX in Japan, to name but a few.

CHAdeMO has also contributed to the acceleration of EV adoption in Asia this year as it formed part of the Japanese delegation in panel discussions, gave presentations and exchanged opinions at the APEC Automotive Dialogue and AIMECC EV seminar.

Infrastructure WG Activities

The Infrastructure WG Workshop was held on 9 December this year. With the charging infrastructure now widely installed at the national level, more projects on the improvement of service quality and on communicating the environmental aspects, mainly on motorways and *Michinoeki* (roadside stations), were reported. Proposals were also made on the sustainable deployment and maintenance of infrastructure, such as new services for EV users and the introduction of maintenance support.

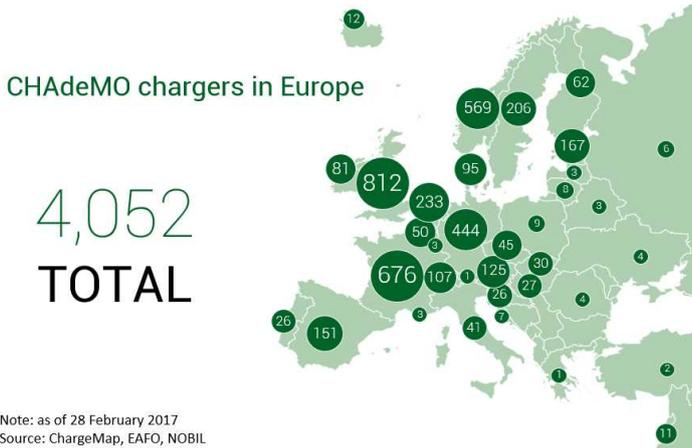


Since Supporting Members have expressed a great deal of interest in high-power charging and multi-outlet charging, the priority items for FY 2016 activities, Mr Imazu, Head of the Technical WG, compiled a technical report on the revised specifications concerning these issues.

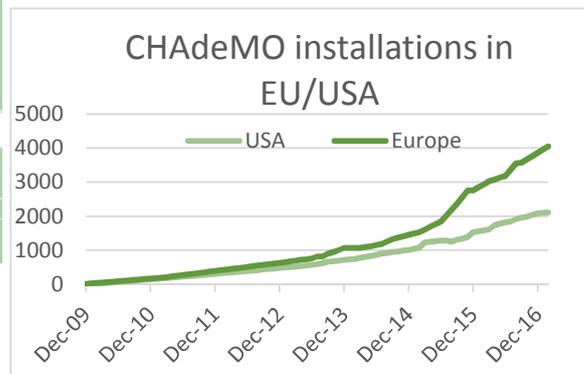
CHAdEMO in Europe

Fast charger installation accelerates in Europe

DC fast charger deployment in Europe is accelerating! The number of CHAdEMO charge points passed the 4,000-mark in February 2017, less than a year after the 3,000-mark achieved in March 2016.

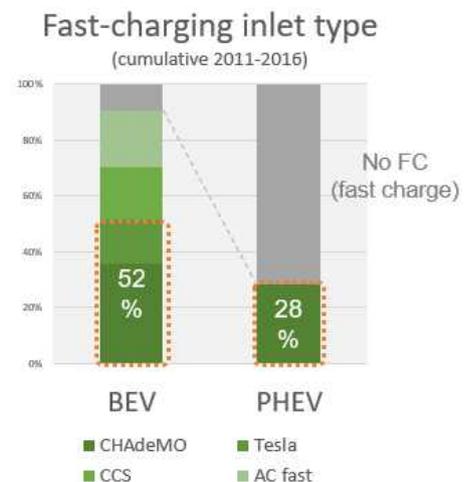
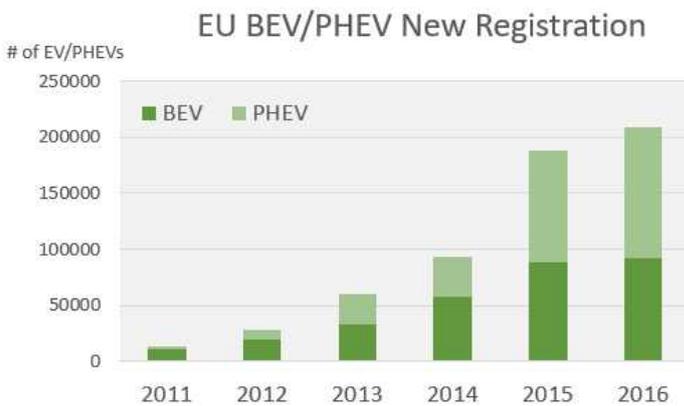


These fast chargers, equipped with both CHAdEMO and Combo2 connectors, have clearly become the de facto standard in the EU market.



While plug-in sales growth stagnates, CHAdEMO remains strong

The European BEV market was relatively quiet, whereas the PHEV market outgrew it in 2015 and continues its quick growth in 2016. Cumulatively, CHAdEMO is compatible with over half (52%) of the BEV stock in Europe (source: JATO) and remains the only option for fast-chargeable PHEVs through 2016.



Source: EAFO, JATO, CHAdEMO Europe analysis
Note: Passenger vehicles only.

High power is in the air

The talk in the industry is around high-power charging. EU-funded projects for 150kW-350kW chargers are already being launched and European operators are busy planning for their charging infrastructure upgrades in preparation for the next-generation EVs with bigger battery capacities.

Following the successful demonstration of high-power CHAdeMO charging (v1.2) through a media-attended event in Japan, CHAdeMO intends to host another connection test/demonstration in Europe in the second half of the year. Stay tuned for updates on the details of the test.

European membership and members meetings

Our membership base in Europe continues to increase on a steady basis. In the past one and a half years, the number of European members has grown by 20%.

At the request of our members we held this fiscal year's European annual meeting in Munich, during the e-mobility trade fair eCarTec/eMove360, for the 3rd year in a row.

▪ European annual members meeting

Our 7th annual meeting was held on 19 October and was open to all members. It was the second year to feature Dave Yoshida, Secretary General from CHAdeMO HQ, who shared CHAdeMO's strategy and roadmap. Eleven presentations were given in total, covering topics from high-power chargers, V2X/fast charging projects and a CHAdeMO simulator to a multi-standard charger usage study.



European annual members meeting

▪ Information sessions for operators

It is extremely important that charge point operators be updated on our technical roadmap. This year, we hosted several "Chat with Dave" sessions over the phone to inform not only our Regular members but operators who have CHAdeMO charge points in their portfolio.



North American information session

▪ North American information session in Canada

Taking advantage of the CHAdeMO stand at EVS29, an information session was held in Montreal to update our

North American members on the latest CHAdeMO developments.

Technical workshops for Regular members

This year we hosted two face-to-face Regular member technical meetings on top of several teleconference sessions.

- **High-power CHAdeMO technical updates in Paris**

On 25 April, we held a half-day workshop on the High-Power CHAdeMO working draft with Mr Imazu, head of CHAdeMO's Technical WG, in Paris. Our European members flew in from various parts of Europe to go over the high-power CHAdeMO technical requirements.

- **High-power CHAdeMO final draft teleconference**

In early October, multiple phone conferences were organised to discuss point by point the High-Power CHAdeMO specification's final draft. These phone conferences, made available for various time zones, attracted some 30 international members.

- **European technical meeting in Munich**

On 20 October, a face-to-face Technical Meeting took place at Munich Messe during the eCarTec/eMove360 exhibition. Experts from the Tech WG and High-Power SWG came to share updates on their activities and discuss key points for the upcoming publication of CHAdeMO 1.2.



European technical meeting

- **Vehicle ID SWG teleconference**

On 13 February 2017, discussions on vehicle IDs kicked off in preparation for the next major update of the protocol, CHAdeMO 2.0. This group will be putting together recommendations from the European perspective.

CHAdeMO stands in Hannover, Montreal and Munich

Already a tradition in its 4th year of co-exhibition, CHAdeMO Europe organised shared stands this year on two continents, at Hannover Messe's Mobilitec, EVS29 in Montreal and eCarTec, all in response to our members' requests.

- **Hannover Messe 2016 (Hannover, April 2016):** CHAdEMO's 4th attendance at Hannover Messe featured a 54-sqm stand with six members. We had a variety of semi-fast chargers (22-25kW) next to the latest connectors, all surrounding a Nissan Leaf in this joint booth, showcasing a whole family of CHAdEMO products.



Hannover Messe 2016

- **EVS29 (Montreal, June 2016):** CHAdEMO attended EVS29 in Montreal, the biggest EV-related conference, as an exhibitor and speaker. Joined by two charger manufacturers and a BMS manufacturer around a Nissan Leaf, the High-Power CHAdEMO protocol and its V2H/V2G capabilities were the key conversation points with visitors to the stand.



eCarTec 2016/eMove360

- **eCarTec/eMove360 (Munich, October 2016):** Hosting six member companies from Portugal, France, Korea and Japan, the 64-sqm booth showcased yet again a variety of CHAdEMO chargers (multi-standard, 44-100kW, V2G) and connectors with a 30kWh battery Leaf. The annual members meeting coincided with eCarTec.

PR opportunities and PR tool enhancement

To disseminate information on CHAdEMO's advantages and eventually accelerate EV adoption in general, CHAdEMO continues to actively seek opportunities to convey its message and to enhance its communication tools.

Conferences & presentations

This year again, we have been present at some key electro-mobility events. At **EVS29 (Montreal)**, CHAdEMO presented a paper on the usage of multi-standard chargers, analysing data gathered from four European operators (Fastned, Smatrics, Rapid Charge Network and Clever) showing how these chargers were used in reality. **Intercharge Network Conference 2016 (Berlin)**, **EV Roadmap Conference (Portland)**, **World Mobility Summit (Munich)** and **European**



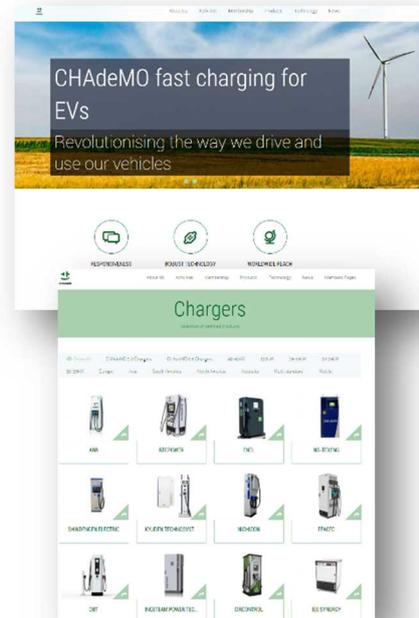
Battery, Hybrid and Fuel Cell Electric Vehicle Congress (Geneva) are examples of the international conferences CHAdEMO spoke at.

- **Website overhaul**

Building on the brochure updates in 2015, we have undertaken an overhaul of our website for the first time in four years. With a clean, modern look and featuring a catalogue function for certified chargers, we hope to better cater to the needs of our members as well as of those seeking information on CHAdEMO and its products.

- **Platform for electro-mobility**

CHAdEMO Europe joined the Platform for electro-mobility (<http://www.platformelectromobility.eu/>) in 2016. It is a European alliance of 25 producers, infrastructure managers, operators, transport users, cities and civil society organisations from across industries and transport modes. The Platform advocates the acceleration of electrification for all modes of transport.



New website

Activities in FY 2016

	2016 April	May	June	July	August	September	October	November	December	2017 January	February	March
Board of Directors			★				★		★			★
Steering committie	★	★	★	★		★		★		★	★	
General Assembly · European meeting			★(6/1) General Assembly					★(10/19)European meeting				
Technical Workshop			★(5/31) Technical manual Ver.0.0				★(10/19)European Tech workshop			★(1/31)Technical specifications Ver.1.2FD		
			★(6/28)Specifications Ver.1.2(Draft)							★(3/24) Technical specifications Ver.1.2		
			★(6/30)Test Specifications Ver.1.1							★(3/28-29) HPC Interoperability Test		
			★(7/12) Protocol Check Sheet Ver.1.1_v1									
			★(7/22) Technical manual Ver.0.1									
						★(9/1)Protocol Check Sheet Ver.1.1_v2						
						★(9/30) Specifications Ver.1.2 2nd Draft						
Infrastructure Workshop Location Information		★(4/20) Update				★(8/2) Update				★(12/9)#27	★(1/16) Update	★(3/9) Update
IEC TC69/MT5			★Canada		★Japan		★Germany				★Netherlands	
IEC TC69/PT63110											★Germany	
IEC PT61851-23-1						★Sweden		★Bergium		★Germany		
Certification test				★Nichicon					★Nichicon		Mitsubishi Electric	★
				★ENEL								
PR activity, etc.	★(4/25-29)Hannover Messe											
			★(6/29) EVS29 presentation									
							★(10/18-20) eMove2017 @Munich					
									EEVC@Geneva (3/14-16)★			
									HPC Interoperability Demonstration ★ (3/30)			

Board meetig/WG

Board of Directors / Steering committie

	date	Main Agenda
75th SC	15-Apr	FY2012 Action plan, General Assembly plan
76th SC	30-May	General Assembly plan, Tademark guidelines
Founding B of D	1-Jun	General Assembly plan, Tademark guidelines
77th SC	3-Jun	IEC Activity, PR Action plan, V2H extension
1st B of D	8-Jul	Tademark guidelines, V2H extension
78th SC	8-Jul	PR Action plan, CHAdEMO Europe report
79th SC	9-Sep	Certification system, supplementary budget
2nd B of D	7-Oct	JIS Standard, pacemaker , managaement of secretariat
80th SC	11-Nov	JIS Standard, pacemaker , managaement of secretariat
3rd B of D	16-Dec	Certification, pacemaker, managaement of secretariat
81st SC	13-Jan	Pacemaker, OEM charger, PR measures
82nd SC	17-Feb	Interpretation of Technical Standards, Patent policy
4th B of D	10-Mar	Managaement of secretariat, Ver1.0 compatibirity

Boad members : Nissan, Mitsubishi motors, Toyota, Subaru, TEPCO, HONDA, HITACHI, Panasonic, Dave Yoshida(secretary)

Specifications WG

	date	Main Agenda
16th	10-Jun	HPC extension review
17th	15-Jul	High power / protection SWG review, IEC feedback
18th	2-Sep	High power SWG review, multi outlet review
	4, 7-Oct	2nd DRAFT review meeting / telco
19th	28-Oct	2nd DRAFT comment, Europe meeting review
20th	15-Nov	2nd DRAFT comment, Protection SWG review
21st	21-Dec	2nd DRAFT comment, Protection SWG review
22nd	18-Jan	ver.1.2 Final DRAFT comment review
23rd	1-Mar	ver.1.2 Final DRAFT comment review

WG members :

Nissan, Mitsubishi motors, Toyota, Subaru, Honda, Suzuki motor, Mazda, Isuzu, Tesla, Takaoka Toko, Nichicon, Hasetec, HITACHI, Takasago, NS-Texteng, YAZAKI, Sumitomo Electric Industries, Shindengen, Kikusui, FUJITSU TEN, Vector Japan, UL Japan, TUV Rheinland Japan, TEPCO(chair, secretary)

High power charging SWG

	date	Main Agenda
10th	5-Apr	Schedule plan, High current control, High voltage scope
11th	21-Apr	High current control, communication
12th	23-May	Europe meeting review, CCS activity, communication
13th	29-Jun	High voltage, temperature monitoring, HPC demo plan
14th	26-Jul	High current control, Harmonization with IEC
15th	1-Sep	High current control, Harmonization with IEC
16th	21-Nov	High current control, Schedule plan
17th	5-Dec	Test specification, High voltage scope
18th	19-Jan	Hogh voltage measures, Connector design
19th	14-Feb	Hogh voltage measures, Harmonization with IEC
20th	17-Mar	Hogh voltage measures, Harmonization with IEC

SWG members :

Mitsubishi motors, Toyota, Honda, Isuzu, Yazaki, Fujikura, Sumitomo Electric Industries, Japan Aviation Electronics, Shindengen, Takaoka Toko, NS-Texteng, Nichicon, UL Japan, TUV Rheinland Japan, TEPCO, Nissan(chair, secretary)

Self-diagnostic function SWG

	date	Main Agenda
4th	13-Jul	Self-diagnostic circuit, comment review

SWG members :

Nissan(chair), Mitsubishi motors, Toyota, Honda, Takaoka Toko, Hasetec, Shindengen, TEPCO(secretary)

Protection coordination SWG

	date	Main Agenda
1st	7-Dec	Partial short, I-t characteristic diagram
2nd	16-Dec	Protective coordination(I-t characteristic diagram)
3rd	12-Jan	Protective coordination between fuses and cable, specification

SWG members :

Nissan(chair), Mitsubishi motors, Toyota, Subaru, Honda, Suzuki motor, Mazda, Takaoka Toko, Hasetec, Takasago, NS-Texteng, YAZAKI, JFE Engineering, HITACHI, Shindengen, Vector Japan, TEPCO(secretary)

Connector SWG

	date	Main Agenda
Review(e-mail)	27-Mar	Performance confirmation V1.2 (Final)
Review(e-mail)	21-Jul	Performance confirmation V1.2 (Revision)

Connector SWG members :

Yazaki(chair), Fujikura, Sumitomo Electric Industries, Japan Aviation Electronics, DAIDEN, Hitachi Cable, FURUKAWA ELECTRIC, TEPCO(secretary)

V2H WG

	date	Main Agenda
40th	15-Jul	V2H Guideline / Test Specifications review

WG members:

Mitsubishi motors, Toyota, Honda, DENSO, Panasonic, Sharp, Hitachi IE system, Mitsubishi Electric, Takasago, Nichicon, YAZAKI, Sumitomo Electric Industries, TSUBAKIMOTO CHAIN, TEPCO, Nissan(chair, secretary)

Certification WG

	date	Main Agenda
9th	21-Apr	FY16 activity plan • 1.1 documents update • Update Plan of CHAdeMO Test Tool
10th	26-May	Start date for 1.1 Certification test • Guideline / 1.1 documents update
11th	21-Jun	Guideline / 1.1 documents update, check sheet
12th	17-Nov	Qualification of Certification body, next tester, relief of test specification
13th	26-Dec	Certification procedure, Guideline update
14th	16-Feb	Guideline update, tester developing

WG members :

Mitsubishi motors, UL Japan, TUV Rheinland Japan, IDIADA, JET, TEPCO, Nissan(chair, secretary)

European SC meetings

	date	Main Agenda
	31-Mar	PR strategy, spring events
	24-May	High power PR, brochure updates, Hannover report
	28-Jun	High power PR, website updates, EVS report
	19-Sep	Website updates, high power connection test, autumn events
	18-Oct	High power, European annual meeting
	12-Dec	PR strategy, website, 2017 events
	22-Feb	SC members, EU directives, spring events

SC members: ABB, ESBeCars, Idiada, Mitsubishi, Nissan

Observers: Enel/Endesa, PSA

European Tech WG

	date	Main Agenda
	7-Apr	High power (Telco)
	25-Apr	High power (Paris)
	13-Oct	ver1.2 draft (Telco)
	20-Oct	High power, tech roadmap (Munich)
	13-Feb	Vehicle ID SWG (telco)

WG participants:

ABB, Applus IDIADA, Bitron, BTC Power, Circontrol, comemso, Ecotricity, Enel/Endesa, Efacec, ESBeCars, EVTEC, Fujikura Europe, IES Synergy, Ingeteam, ITE, JAE Europe, Mahindra Reva Electric Vehicles, Mitsubishi Motor R&D Europe, Mitsubishi Motors Corporation, Nissan, PSA, Recargo, Technische Hochschule Deggendorf, Tesla, Tritium, Sumitomo, Valeo, Vedecom