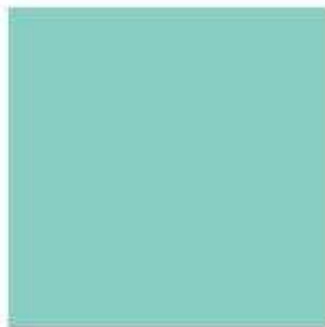


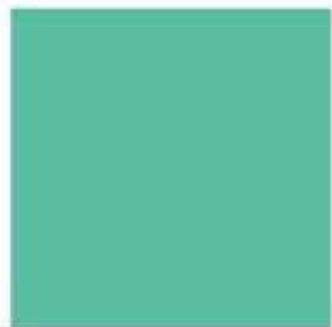


**CHAdemo**



# 2015 Activity Report

(1 April 2015 ~ 31 March 2016)



CHAdemo Association

# From the President



First of all, I would like to extend my deep gratitude to all of our members for their generous support for CHAdeMO Association's Electric Vehicle and Quick Charger promotion activities. The Association was established in March 2010 and is now already in its seventh year.

Looking back on the activities in 2015, the installation of the charging infrastructure has rapidly improved both in Japan and overseas and I feel that electro mobility is now moving into the early majority phase.

First, it would give me great pleasure to tell you that the number of the installation of CHAdeMO exceeded 10000 chargers throughout the world. Of these, approximately 2000 chargers are combined Chargers with the European and American Combo system. We do not compete in the standard of the charger, and come for a stage to promote the spread in harmony.

In Japan, in conjunction with the Next-generation Electric Vehicle Charging Infrastructure Establishment Promotion Project by the Ministry of Economy, Trade and Industry, Nippon Charge, Service LLC has begun operating with four vehicle manufacturers. With new installation accelerating mainly in Europe, 2000 new quick chargers were installed in 2014 (up 50% over 2013), and 4000 new quick chargers were installed in this year, 2015 (up 66% over the year before), the spread of quick charger has been accelerated.

The extension of the CHAdeMO protocol, one of our primary tasks, has seen steady progress as well. We enhanced the certification system of the charging standard by externalising the certification process as well as upgrading the protocol. As to we extended the V2H (Vehicle-to-Home) functionality of the CHAdeMO protocol by publishing standardised specifications.

In the coming years, we shall strive to further develop EV and its infrastructure. For the purpose of the pursuit of the further sustainability, we suggest that CHAdeMO Association will be transformed as general incorporated association. We aim for carrying out improvement of the further business efficiency, improvement of social trust, improvement of the organization governance, securing of transparency of the information at a high level by making an organization a corporation. We will continue our ongoing efforts to the best of poor ability for an electric vehicle and further development of the infrastructure in future by planning promotion of the understanding for CHAdeMO through the information dispatch to the groups concerned.

I look forward to your continued understanding and strong support for our Association.

Toshiyuki Shiga  
President CHAdeMO Association

# History of CHAdeMO

**CHAdeMO Association will be transformed as general incorporated association from FY 2016. We take this opportunity to look back over the history from 2010 when we were established.**

March 2010 Toyota Motor Corporation, Nissan Motor Co. Ltd., Mitsubishi Motors Corporation, Fuji Heavy Industries Ltd., and Tokyo Electric Power Company, Inc. had formally established "CHAdeMO Association. Mr. Tsunehisa Katsumata, chairman of TEPCO was inaugurated as the first president of CHAdeMO. At the time 158 business entities and government bodies including 20 foreign companies from multiple sectors such as automakers, electric utility companies, charger and component manufacturers, charging service providers, etc joined the Association. We announced that the Association aimed to support the diffusion of electric vehicles, which would contribute to the CO2 emissions reduction in the transport sector, from the infrastructure side and to take an active role in the standardisation of EV charging protocols.



July 2010 The first meeting of IEC61851-23 was held to discuss DC charging station standards, in which we presented the technical details of the CHAdeMO protocol. Serge Roy (CHAdeMO Association) became the chair of IEC61851-23. Coinciding with the second meeting of the IEC61851-23 committee, the first meeting of the SC23H/PT62196-3 group was held to discuss DC connectors. Germany and U.S. proposed the Combo connector, with AC and DC connectors integrated, in these meetings.

July 2010 In Europe, the first CHAdeMO Europe meeting was held, in which a decision was made to establish the European steering committee led by PSA, Nissan, Mitsubishi Motors, Think, Endesa, ESB, ABB and the City of Amsterdam. First CHAdeMO leaflets were created and distributed at various trade fairs.

**Eine grenzübergreifende Lösung für Elektrofahrzeuge und Infrastruktur-Lieferanten**  
A Win-Win solution for EVs and infrastructure providers

Die globalen Kosten für die Infrastruktur sollen minimal gehalten werden. Über Jahre hinweg haben wir uns bemüht, die Kosten zu senken und die Ladeinfrastruktur zu optimieren. Die öffentliche Ladung ist ein wichtiger Bestandteil der Elektromobilität. Die strategisch günstigen Standorte werden eine Schlüsselrolle bei der Entwicklung der Elektromobilität spielen.

Global infrastructure costs incurred are minimal. For years, we have been working to reduce the costs of infrastructure. Public charging is a key element of the electric vehicle ecosystem. Strategically favorable locations will play a key role in ensuring convenience and making them the best option for EV drivers.

**500 CHAdeMO Ladestationen bereits eingerichtet**  
500 CHAdeMO stations already installed

Bisher wurden bereits über 500 Ladestationen eingerichtet. Für Japan und andere Teile der Welt bestehen zusätzliche Pläne für viele weitere Installationen. Die öffentliche Ladung ist ein wichtiger Bestandteil der Elektromobilität. Die strategisch günstigen Standorte werden eine Schlüsselrolle bei der Entwicklung der Elektromobilität spielen.

Over 500 CHAdeMO stations have already been installed, and there are additional plans for many more worldwide. Public charging is a key element of the electric vehicle ecosystem. Strategically favorable locations will play a key role in ensuring convenience and making them the best option for EV drivers.

Deutsch  
English



**CHAdeMO**



**Beitrag:**  
Japanisches Unternehmen des verbundenen Ladungsdienstes  
Nissan  
Mitsubishi Motors  
ESB  
ABB  
Stadt von Amsterdam  
Nationale Marketing und Kommunikation  
Mitsubishi Motors  
Petrobras  
CHAdeMO Association

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**CHAdeMO Association**  
**DC Schnell-Ladestandard**  
**DC Fast Charge standard**



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March 2011 Following Mitsubishi Motors Corporation's i-MiEV and Fuji Heavy Industries' Subaru Plug-in Stella, Nissan Motor Company released LEAF in December 2010. In Europe, Peugeot iON and Citroen C-ZERO were introduced to the market. In March 2011 the number of charger manufacturers that developed and offered CHAdeMO DC quick chargers increased from 5 at the time of CHAdeMO foundation to over 20 world-wide. As a result, the number of installed chargers reached 582 in Japan and 41 in other countries.



FY 2010 Upon the establishment of CHAdeMO Association, its Infrastructure Work Group has started tackling a number of tasks related to charging infrastructure deployment. The task groups held 7 meetings with a total of 1,500 people participating, and discussed topics including: charger location information sharing, creating a guidebook on fast charger installation and operations, the Japanese fire prevention ordinance and chargers, development of charging system for multi-storey parking lots, improvement of charging connectors, etc

March 31, 2011 Right after the Great East Japan Earthquake struck, the affected areas faced fuel shortages and CHAdeMO members lent local governments over 100 EVs and temporary quick chargers for free. They were used to send doctors and bereaved families to morgues, and later nurses used them to transport themselves to evacuation centers utilizing the power infrastructure recovered earlier than gas and water.

CHAdeMO's 2nd General Assembly was cancelled due to the Fukushima-Daiich nuclear plant accident occurred on the day, the Association took decisions through email ballots. Mr. Katsumata announced his resignation and Mr Toshiyuki Shiga, COO of Nissan Motor took over as the second president of CHAdeMO in September 2011.



Photo: Masashi Kawata

October 2011 The first Nikkei Smart City Week was held at Pacifico Yokohama, where the first CHAdeMO stand was set up with 15 co-exhibiting members demonstrating technology and products related to the CHAdeMO protocol..



October 2011 After the Great East Japan Earthquake, the need for EV battery as back-up power source during a power failure heightened. With the increasing integration of renewable energy sources in the power mix world-wide, the additional value of EV as enabler for peak shaving and as back-up energy source attracted further attention. The Association set up the V2H extension WG to develop bi-directional charging specifications using the CHAdeMO DC charging interface.

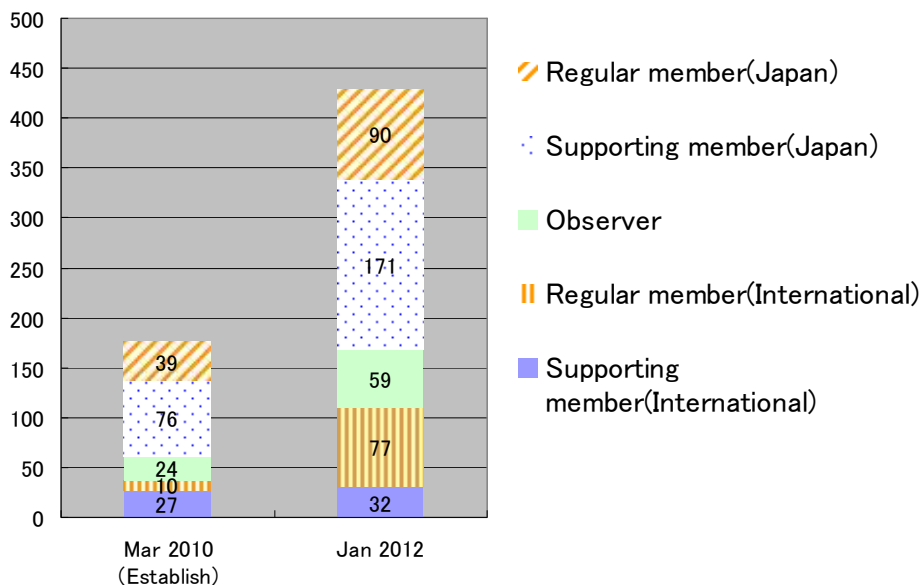
December 2011 Many corporations and organisations had installed DC fast chargers for their own use or for the general public as part of their corporate social responsibility activities. However, the true challenge was how to evolve them into a sustainable business. The Association studied the feasibility of the "membership" business model in its ad hoc WG to evaluate how to reduce the initial investments in EV charger introduction. Upon completing the study, in December 2011, several DC fast charging service companies using this model, including CHAdeMO Charge and Japan Charge Network, were established.

January 2012 CHAdeMO's Specification WG, which had started the revision work in August 2010, held a total of 17 meetings and issued the draft protocol version 1.0 in July 2011. After feedback and inputs from members, CHAdeMO protocol ver. 1.0 was published in January 2012. The revision not only included power quality requirements such as EMC and electrical current ripples but also covered vehicle protective functions such as voltage overload protection and vehicle contactor welding diagnosis.

January 2012 Since the launch of CHAdeMO fast chargers in 2010, they have been steadily growing in numbers and expanding geographically. CHAdeMO installations throughout the European continent reached the 1,000-unit mark in January 2012, a testimonial to CHAdeMO being the world's only practical DC fast charging technology.



March 2012 From March 2010 to March 2012, member companies grew from 158 to 429 with international regular member segment showing highest growth rate, confirming the global appeal of CHAdeMO protocol.

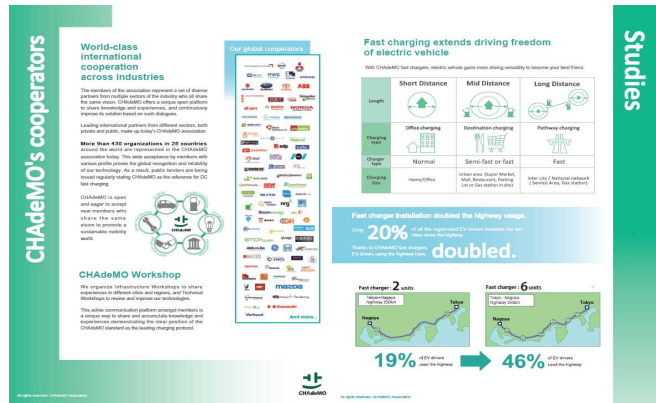
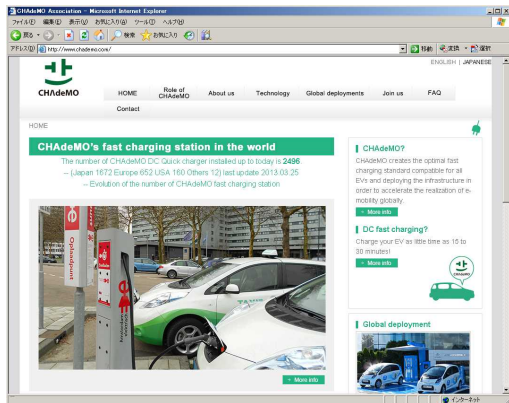


March 2012 One of the major achievements of the Technical WG in the FY2011 was the improvement of connectors. The team evaluated the interface specifications in order to improve the quality and safety of the existing connectors, while maintaining and ensuring the interoperability with upcoming EVs and connectors. These efforts contributed to the release of new connectors by several manufacturers, and the proposal submission for connector specifications to the IEC standardization discussions by JARI.



July 2012 Increased communication was the key goal of our activities for FY2012. The CHAdeMO liaison office in Europe renewed the CHAdeMO website design and content targeted at the global markets with special focus on Europe. The renewed web site went live in January, 2013. With the website re-design, CHAdeMO Europe refreshed brochures for distribution at fairs and conferences. We have made good use of these brochures on

multiple occasions, including two PR tours in FY2012, the Paris Motor Show (September 2012), and other events in various parts of the world.



October 2012 Products using the DC discharge function based on the CHAdeMO protocol were developed and put into practical use, such as Nissan's LEAF to HOME and Mitsubishi Motors' MiEV Power BOX. The Association set up a WG to formulate the common specifications for the system interface in coordination with relevant parties.

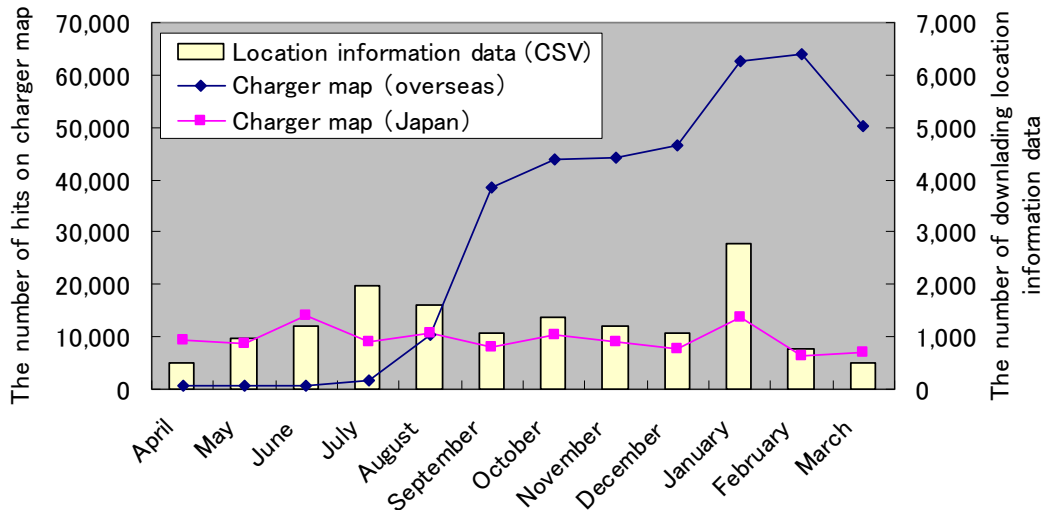
February 2013 After the publication of CHAdeMO Specifications ver.1.0 in January 2012, the Technical WG held 19 meetings to formulate the test specifications and discuss the revisions throughout FY 2012. The Certification WG worked on developing the certification system for third-party certification. On 6-7 February, 2013, the WG conducted system verification and connection tests between ver.1.0-compatible chargers and EVs. Nine CHAdeMO-compatible EVs from seven auto manufacturers were evaluated for the charging operations, safety and EMC.



(From the left Mitsubishi i-MiEV, MINICAB MiEV, OUTLANDER PHEV, Mazda Demio EV, Honda Fit EV, SUBARU Plug-in Stella, Nissan Leaf, TOYOTA eQ, Suzuki EVEVERY)

March 2013 With increased charger installation, the importance of sharing charger information became a common concern to charging infrastructure stakeholders. Amidst this backdrop, CHAdeMO Association has set up its Location Information WG. In March 2013, we started sharing key information on charging stations in the CSV format on the CHAdeMO Association website. The data was updated every 3 months and saw usage at a steady rate.

The number of users accessing the charger location information via the Google map saw a sharp increase from the second half of the fiscal year. This was the result of accelerated charger installation and hence mapping globally, while in Japan, a number of charging location information providers had already sprung up.



March 2013 METI launched a large-scale project named “Next Generation Vehicle Charging Infrastructure Deployment Promotion Project” using 100 billion JPY of supplementary budget for Fiscal Year 2012. With the objective of strategic and quick deployment of charging infrastructure, this project has encouraged municipalities and motorway operating organisations in Japan to issue charger deployment plans, which were made public in April 2013.

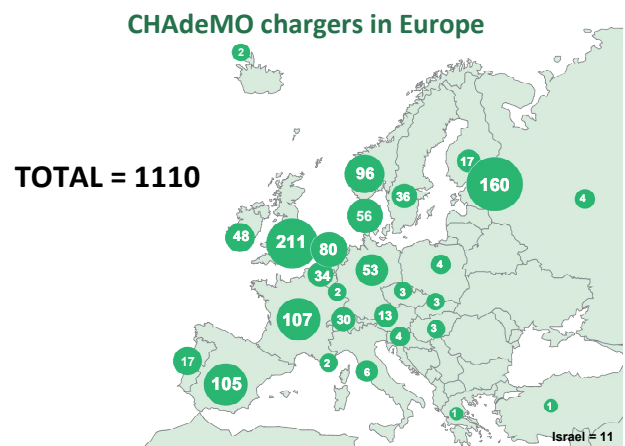
In addition to the government support, in July 2013, four automakers – Toyota, Nissan, Honda, and Mitsubishi Motors, announced the launch of the “PHV/PHEV/EV Charging Infrastructure Promotion Project.” However, as these projects were quite large-scale, many municipalities were not able to follow through on the concrete installation plan within the initially set time frame. As a result, a one-year extension to the original February 2014 deadline for application for these funds was agreed.

September 2013 A CHAdeMO-coloured C-ZERO ran 1,000 km over 4 days in the South-West of France covering around 325 km per day. As part of an EV rally, Tour Poitou-Charentes, which covered 350 km over 2 days, the CHAdeMO team upped the challenge by driving 650 km to the start of the rally and back, 100% electrically, using the fast chargers available along the way and reporting on the adventure in real-time through social media. The trip demonstrated that driving long distances in an EV that has about 120km of autonomy was possible with CHAdeMO chargers. A number of regional and specialist media wrote about CHAdeMO team’s challenge.





March 2014 The count for CHAdEMO chargers reached 1,000 in Europe. The European Union has decided to embrace multistandard charging in their final wording of the Alternative Fuels Infrastructure directive. De facto market standard in Europe becoming increasingly multistandard, the directive has followed and confirmed this market trend.



March 2014 Standards related to DC charging were approved by the International Electrotechnical Commission (IEC) and published as IEC61851 - 23/24 and IEC62196-3 from March to July in 2014. These standards define the DC charging system, digital communication and connector specifications.

#### Process of International Standardization

- Jul 2009 Market launch of i-MiEV (Mitsubishi) and Plug-in Stella EV (Subaru), the first CHAdEMO-compatible EVs
- Nov 2009 NWIP (New work item proposal) submission for 61851-23, followed by 61851-24, 62196-3
- Apr 2010 Publication of CHAdEMO standard specifications rev.0.9
- May 2010 Start of charger certification procedure
- Aug 2010 Launch of Specifications Work Group (WG)
- Dec 2010 Market launch of Leaf (Nissan)
- Jun 2011 Launch of Connector WG
- Oct 2011 Launch of Specification 1.0 WG as well as V2H Extension Guideline WG
- Jan 2012 Publication of CHAdEMO standard specifications rev.0.9.1
- May 2012 CDV review for IEC 61851 finalized in IEC meeting (Tokyo), CDV to be reviewed
- Sep 2012 Publication of JIS standard specification (TS D0007)
- Apr 2013 CDV status for IEC61851 approved in IEC meeting (Toronto)
- May 2013 Publication of CHAdEMO standard specifications rev.1.0.0
- Nov 2013 Release of V2H Guideline 1,0
- Jan 2014 FDIS approval of IEC 61851-23, 61851-24

	System A CHAdeMO (Japan)	System B GB/T (PRC)	System C	
			COMBO1 (US)	COMBO2 (DE)
Connector				
Dimensional requirements				
Communication Protocol	CAN		PLC	

May 2014 In addition to the government’s support, four vehicle manufacturers – Toyota, Nissan, Honda and Mitsubishi Motors – announced the launch of the “PHV, PHEV and EV Charging infrastructure Assistance Project” and, in May 2014, with the participation of these four companies, Nippon Charge Service LLC (NCS) was established with additional funding from the Development Bank of Japan Inc., Tokyo Electric Power Company, Inc., and Chubu Electric Power Company, Inc.

The new company compensated for the installation cost, which was not fully covered by government subsidies, and provided car owners with a universally-accepted charging card, enabling them to use all chargers in NCS’ charging station network. The system was expected to accelerate the deployment of charging infrastructure.

June 2014 The CHAdeMO Team joined the world’s biggest EV rally ‘the WAVE Trophy’. The Team, led by Natalia Kozdra from the European Secretariat, traversed Germany, Austria and Switzerland, driving 2,000km in total over 10 days, 100% electrically. The team was supported in its mission of promoting fast charging by a portable CHAdeMO charger from Swiss member company EVTEC, on board a CHAdeMO-compatible Peugeot Partner. With an additional mission of providing fast charging top-up to 11 CHAdeMO-compatible EVs participating in the rally along the way, the team clocked in 66 charging sessions in total and helped two teams gain 2nd and 3rd places in the ‘Popular WAVE’ category, proving the benefits of fast charging in real-life.



October 2014 Following the IEC standardisation, JIS D61851-23/24 and JIS D62196-3 were published in Japan in October 2014. In Europe, the IEC standards have been adopted as EN standards (EU) as well as EU member states' national standards, such as DIN standards (Germany) and BS standards (UK). In North America, DC charging standard IEEE SA – P2030.1.1 was published by the Institute of Electrical and Electronics Engineers (IEEE), based on the IEC standards, in March 2016.

October 2014 Europe organised its 5th European member meeting, coinciding with the eCarTec exhibition in Munich. On the same day, CHAdeMO organised the first Fast Charging Europe Conference, aimed at sharing best practices and exchanging experiences in fast charging by all standards. Speakers from UK, Sweden, France, Spain, Austria, Japan and Norway gave presentations of their projects, giving the public an insight into their work and sharing their views on what works, what doesn't, and what should be improved.



# Technical WG Activities

Technical Group has four WGs in collaboration in order to improve the CHAdeMO technology and constantly improve its quality.

## Specifications WG

In January 2016, the Specifications WG has published the CHAdeMO protocol ver. 1.1 after having aggregated the comments and feedback from Regular members to the revision draft of March 2015 as well as the working draft of September 2015. The updates include the following points:

- Dynamic control of maximum charging current: This function allows the charger to dynamically change the available output current during charging. By doing so, the charger optimises control for simultaneous charging of multiple vehicles as well as rate discount depending on the power load status.
- Requirement for small (diameter) charging cable: Connector specifications for small capacity cable to ensure safety were defined. This will contribute to increased user convenience as well as reduction of 'lower power' charger costs.
- Adopting manufacturers' optional codes: This function enables vehicle and charger manufacturers to have their unique functions using CHAdeMO interface.

The Specifications WG plans to publish a Guidebook (technical manual) that will provide the background of specifications formulation, design tips, operations rule for optional functions, and other information that may not be necessarily found in the Specifications documents.

## Certifications WG

Certifications WG is under discussion with the certification bodies to manage CHAdeMO certification test smoothly.

In FY2015, the revised edition of CHAdeMO certification guidelines was published in February.

In addition, Certifications WG is preparing for the maintenance of the re-compliance test and the compliance test corresponding to specifications and certification ver.1.1, and going to publish it soon.

## V2H WG

V2H WG revised the certification technical operation and published V2H Test Spec DC 2.0 as well as Self Declaration Form in December 2015. V2H WG made the preparations to shift V2H/L certification to third-party certification like the certification tests for fast chargers and the call for applications was announced in April 2016.

V2H WG cooperated in preparations for the certification of power conditioners for V2H with JET, Japan Electrical Safety & Environment Technology Laboratories, and started a two-phase operation demo with the V2H/L certification in September, 2015.

## High Power Studying SWG

A small WG (SWG) focusing on the CHAdeMO extension for higher power is set up in order to increase the maximum output power to anticipate the user needs to reduce the EV charging time in view of the expected increase in EV battery capacity in the near future. Since its first meeting on March 31, 2015, the SWG has met 10 times and plans to publish the amendments to the protocol that will enable 150kW/350A charging within FY2016.

# Infrastructure WG Activities

Infrastructure WG was held in May, September and March in FY2015 as follows. Until last year, a problem about the charge infrastructure maintenance and the report of the example were main themes of the announcement. However, a national charge infrastructure maintenance plan by the state support was numerically almost accomplished, and a service network by Nippon Charge Service LLC realized the unionization of the charge service. Based on these, the announcement about the future vision of EV such as the consecutive system with V2H, EV and the electric power system became the main theme of 2015.

Infrastructure Workshop in FY2015

Date	Participant	Main agenda	Presenter
24th 13-May	135	<ol style="list-style-type: none"> <li>1. V2H standardization activity and Reports on the Status of periphery</li> <li>2. Report about the action to smart grid-related proof business               <ol style="list-style-type: none"> <li>2.1 V2G demonstration experiment in Hawaii</li> <li>2.2 V2B demonstration experiment in the Keihanna district</li> <li>2.3 V2H demonstration experiment in Yokohama City</li> </ol> </li> </ol>	<p>Nissan</p> <p>Hitachi</p> <p>Mitsubishi Motors</p> <p>Nissan</p>
25th 29-Sep	134	<ol style="list-style-type: none"> <li>1. Theme lecture "Harmony of electric power system and EV"               <ol style="list-style-type: none"> <li>1.1 Future of the electric power system and EV</li> <li>1.2 V2X seen from PCS (introduction of the demonstration experiment)</li> <li>1.3 Microminiature EV sharing with the pico grid system</li> <li>1.4 Action of electric vehicle charge system WG in ITS Japan</li> </ol> </li> <li>2. Guidance of security and the law regulation seminar of the next-generation car</li> <li>3. Charge spot search application "Evsmart"</li> </ol>	<p>TEPCO</p> <p>Honda</p> <p>DENSO CORPORATION</p> <p>ITS Japan</p> <p>UL Japan</p> <p>Ayudante, Inc.</p>
26th 25-Mar	110	<ol style="list-style-type: none"> <li>1. Life with OUTLANDER PHEV and V2H</li> <li>2. Introduction of Gakken comics "secret of a car running by electricity"</li> <li>3. Introduction of the action example about the outside electric supply</li> <li>4. Introduction of student formula EV, and parts support</li> <li>5. Introduction of the CHAdeMO charge analyzer made in comemso company</li> <li>6. Application of the movement type EV quick-charger</li> <li>7. Guidance of the standard development trend seminar of the cyber security</li> </ol>	<p>Mitsubishi Motors</p> <p>Mitsubishi Motors</p> <p>Honda</p> <p>Society of Automotive Engineers of Japan</p> <p>TOYO Corporation</p> <p>DENGEN CO.,LTD</p> <p>UL Japan</p>

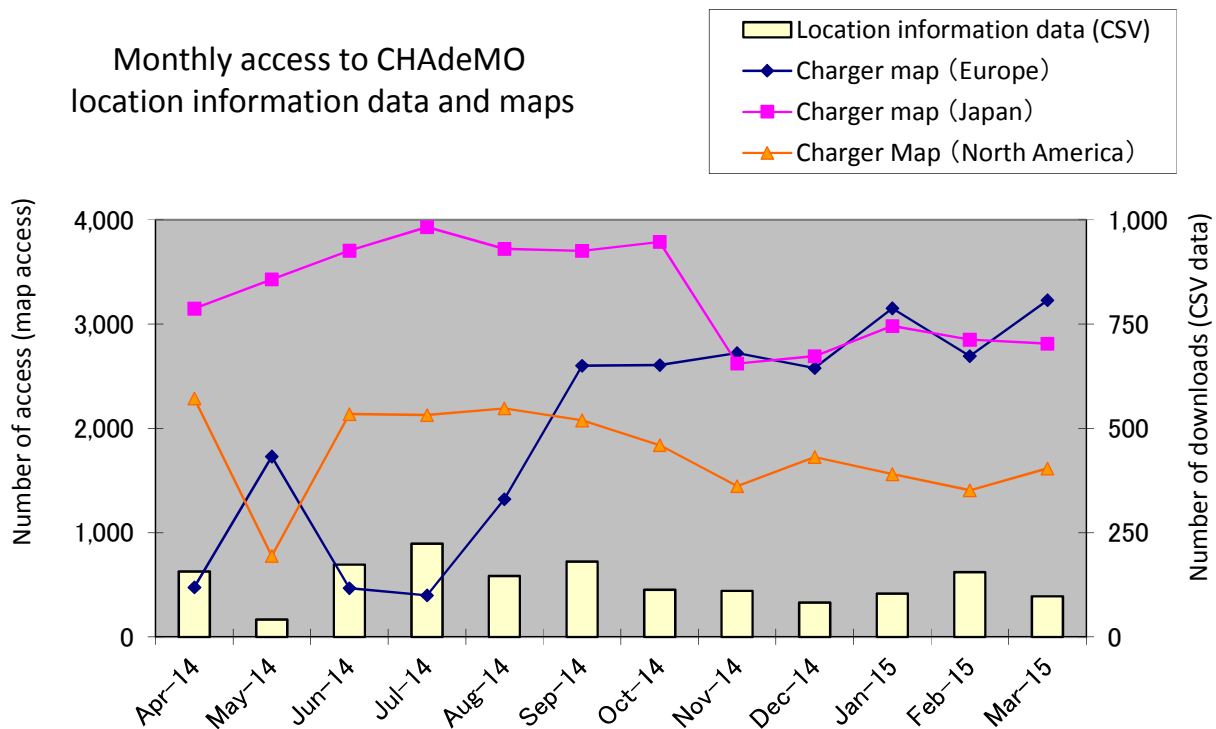
## Location Information Sharing WG

Since March 2013, the Charger Location Information WG has made public the charging station data from the CHAdeMO Association's website in a CSV format. Shared data include the location (latitude/longitude), opening hours, method of use and the charge price for each fast and normal charger (100v/200v).

There are plural search sites that have a high frequency of the information update and fulfilling information. In view of it, we reviewed activity of positional information WG and the system, and posted the link to the outside charge stand search sites on CHAdeMO site.

The usage performance is as follows. There are well-established users who use the data continuously, and around 100 data were downloaded every month. In addition, charger location information shown in CSV format was changed to the Excel format with a review of the activity mentioned above since March, 2016.

In addition, we posted the link of outside charge stand search sites in the late FY2015 as mentioned above. As a result, the number of the access to Google map of CHAdeMO Association is on a downward trend. So we are going to stop publication of Google map within FY2016.

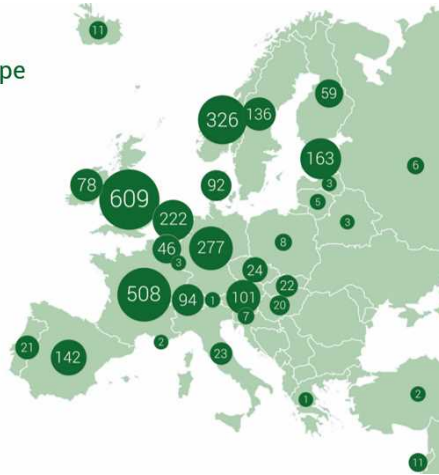


# CHAdEMO in Europe

## Fast charger installation accelerates in Europe

CHAdEMO chargers in Europe

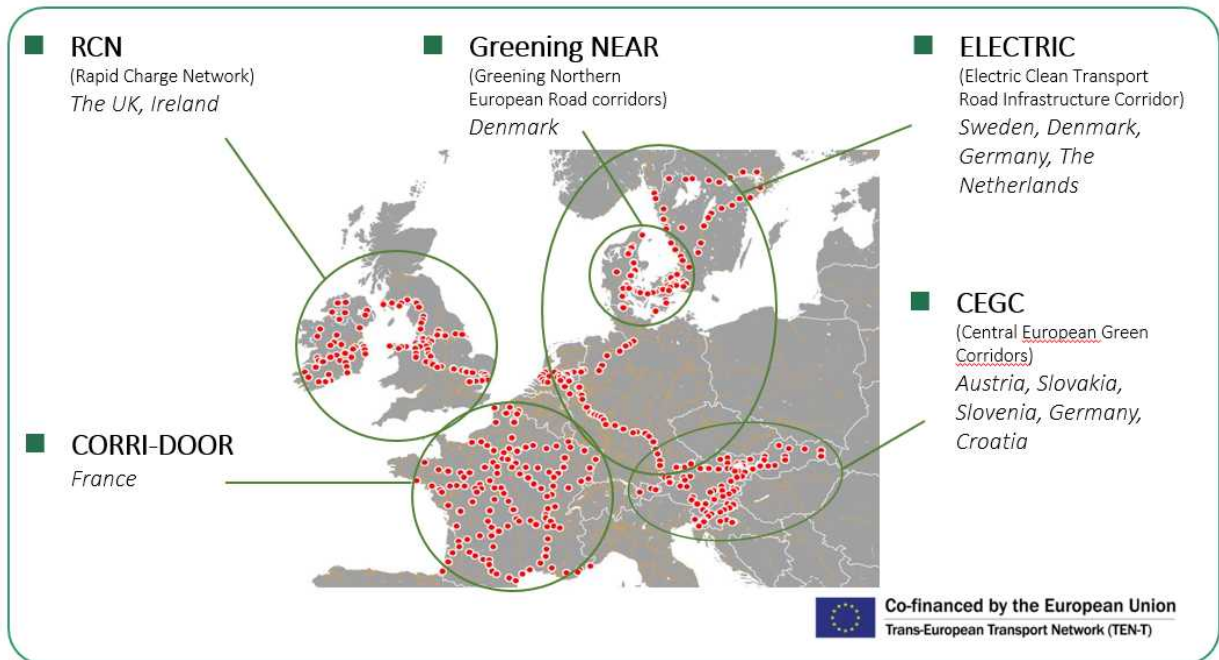
3,028  
TOTAL



Almost all new fast chargers being installed in Europe are multistandard chargers equipped with both CHAdEMO and Combo2 connectors, clearly demonstrating how ‘multistandard’ has become the de facto European standard. As of March 2016, almost half of the CHAdEMO charge points deployed are part of multistandard chargers.

DC fast charger installation in Europe accelerates! Upon the publication of international (IEC) and regional (EN) charging standards that included CHAdEMO as well as with the EU Directive embracing multistandard chargers going into effect, European investors seem to have confidence in fast chargers. The number of CHAdEMO charge points has reached 3,000 in March this year, almost doubling from 1,600 one year ago.

One of the driving forces of this multistandard phenomenon is the EU subsidy. Already some 500 multistandard fast chargers are in place thanks to the EU-funded TEN-T projects that started in 2013. Another batch of 500+ multistandard chargers are on their way as their successor - called the CEF (Connecting Europe Facility) - projects are launched, accelerating even further the fast charger installation.





## CHAdeMO stands continue to attract visitors

Almost a tradition in its 3<sup>rd</sup> year of co-exhibition and given the continued requests from our members, CHAdeMO Europe has participated in two major trade fairs in FY2015: Hannover Messe's Mobilitec and eCarTec, both highly in demand among our members in Europe.

- **Hannover Messe** (Hannover, Germany, April 2015): With 9 Members, we showcased a wide variety of CHAdeMO products on the biggest CHAdeMO stand ever – 85 sqm – at Hannover Messe's Mobilitec. Surrounding two EVs – Nissan e-NV200 van and Kia Soul EV – were various CHAdeMO products including a new multi-outlet fast charger that can charge up to four EVs simultaneously with combined power up to 180kW, wall box, portable charger, V2H power conditioner, BMS and some connectors.



- **eCarTec** (Munich, Germany, October 2015): Our third time in a row, we were again at Europe's biggest e-mobility professional trade fair, eCarTec with 8 co-exhibitors on an 80 sqm stand. Both of our EVs, Nissan e-NV200 van and Mitsubishi's new Outlander, had an accompanying European V2G bi-directional charger connected. With our trademark booth feature - map of Europe - we pushed forward the V2H/G concept, which attracted attention from visitors.



## European annual meeting #6 in Munich

The location for this year's annual meeting was again Munich, during the eCarTec trade, which has become everyone's favourite meeting place in Europe, hence convenient for many of the members.

### ▪ Technical workshop for Regular members

The morning session was Regular members only, where technical discussions were held. Makoto Takahashi and Tomoya Imazu presented the CHAdeMO 1.1 specs and V2H extension/ certification respectively. CHAdeMO's Secretary General Dave Yoshida led the discussion on the upcoming high power CHAdeMO, which resulted in a fruitful exchange with plenty of questions. Idiada presented the first EV charging controller certification that had taken place.



### ▪ European annual member meeting

The afternoon session, open to all members, started off with a keynote presentation from Allego, a Dutch charger operator that plans to install over 200 multistandard chargers in Germany. The presentation told a story of daily charger operations, which participants were able to relate to.

Various topics including the global CHAdeMO strategy, technology roadmap, and CHAdeMO's

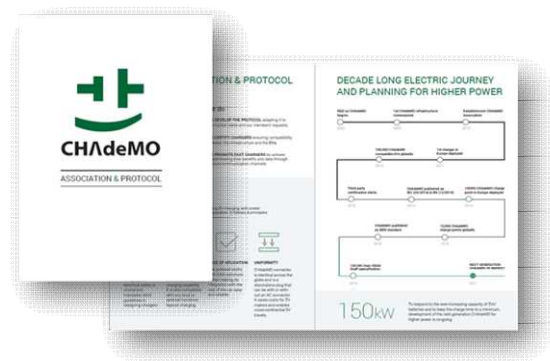
PR/communication followed, with active participation from the members.



## New face of PR/communication

- **Brochure updated** We have updated the design of our brochures after three years. The new brochures use white as the base, with CHAdeMO green and light grey. We made sure we used less text and more infographics that are easy to understand. The new brochures can be downloaded from our website:

[http://www.chademo.com/wp/wp-content/uploads/2016/04/brochure\\_04.2016.compressed.pdf](http://www.chademo.com/wp/wp-content/uploads/2016/04/brochure_04.2016.compressed.pdf)



# Activities in FY 2015

	2015 April	May	June	July	August	September	October	November	December	2016 January	February	March
Board Meeting	★ ★	★ ★	★	★ ★	★	★ ★	★	★	★ ★		★	★
General Assembly • European meeti			★(6/8)CHAdeMO General Assembly				★(10/20) European member meeting					
Technical Workshop						★(9/1) Release of Technical Specifications Ver.1.1WD	★(10/20) European Technical Workshop		★(12/11) Release of Technical Specifications Ver.1.1		★(12/25) Release of V2H/V2L TestSpec DC 2.0	
											★(2/19) Technical Specifications Ver.1.1	
Infrastructure Workshop		★(5/13)#24				★(9/29)#25					★(3/25)#26	
Location Information Sharing WG			★(6/30) Update				★(10/21) Update		★(12/17)Update			
International standardiza	★ IEC MT5@Tront							★ IEC MT5@Nanjing				
											★(3/2) IEEE2030.1.1TM-2015 publisher	
Certification test									★ Nichicon		★Kyuden Technosystems	
V2H/V2L Certification test			★Start of V2H/V2L certification trial							★HONDA		★Mitsubishi Electric
PR activity, etc.	★Hannover Messe						★(10/1) EVEX Panel session: Charging Infrastructure					
							★(10/20) eCarTec@Munich					

### Specifications WG

	date	Main Agenda
	1-Sep	Specifications ver.1.1 WD issued
13th meeting	2-Oct	Comment on WD, test specifications and high power extension
14th meeting	27-Nov	Comment on WD and test specifications
	11-Dec	Specifications ver.1.1 issued
	19-Feb	Test Specifications ver.1.1 issued

Specifications WG members :

Nissan (chair), Mitsubishi motors, Toyota, Subaru, Honda, Suzuki motor, Mazda, Isuzu Motors, Tesla, Takaoka Toko, Hasetec, HITACHI, Fuji electric, Takasago, NS & SUMIKIN TEXENG, YAZAKI, Sumitomo Electric Industries, TEPCO Shindengen, KIKUSUI Electronics, Nichicon, Vector Japan, TUV Rheinland Japan, HYUNDAI MOTOR

### Self-diagnosis SWG

	date	Main Agenda
1st meeting	18-Dec	Self-diagnosis (safety enhancement)
2nd meeting	9-Feb	Self-diagnosis (safety enhancement)
3rd meeting	29-Mar	Self-diagnosis (safety enhancement)

Self-diagnosis SWG members :

Nissan (chair), YAZAKI, Sumitomo Electric Industries, Shindengen, Mitsubishi motors, Isuzu Motors, NS & SUMIKIN TEXENG, TUV Rheinland Japan, UL Japan, TEPCO

### Connector SWG

	date	Main Agenda
	20-Jan	Performance confirmation for connector (Ver.1.1) issued

Connector WG members :

Yazaki (chair), Fujikura, Sumitomo Electric Industries, Japan Aviation Electronics, DAIDEN, FURUKAWA ELECTRIC

### High power SWG

	date	Main Agenda
1st meeting	31-Mar	Background, technical issues, schedule
2nd meeting	16-Apr	Technical issues
3rd meeting	14-May	Technical issues
4th meeting	27-May	Prototype, evaluation
5th meeting	19-Nov	Test report, performance target
6th meeting	17-Dec	Technical and safety issues
7th meeting	1-Feb	Technical and safety issues
8th meeting	25-Feb	Technical and safety issues
9th meeting	15-Mar	Technical and safety issues, high voltage(next generation)

High power SWG members :

Nissan (chair), YAZAKI, Sumitomo Electric Industries, Shindengen, Mitsubishi motors, Isuzu Motors, NS & SUMIKIN TEXENG, TUV Rheinland Japan, UL Japan, TEPCO

### V2H-WG

	date	Main Agenda
	25-Dec	V2H TestSpec DC 2.0 issued

V2H-WG members :

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

### V2H/V2L Certification SWG

	date	Main Agenda
1st SWG	24-Nov	V2H/L Certification preparation for a third party
2nd SWG	18-Dec	Preparation for prover test demonstration
3rd SWG	27-Jan	V2L prover test demonstration
4th SWG	26-Feb	Review about prover device use
5th SWG	29-Feb	V2H prover test demonstration

V2H/V2L Certification SWG members :

Nissan (chair), UL Japan, TUV Rheinland Japan, IDIADA, Intertek Japan, JET, Vector Japan

### Certification WG

	date	Main Agenda
1st meeting	9-Jul	Technical issues
2nd meeting	5-Aug	Certification procedure, extended functions
3rd meeting	17-Sep	Certification procedure, related documents
4th meeting	5-Nov	Certification guideline, Application form, procedure
5th meeting	21-Dec	Certification related documents
6th meeting	28-Jan	Certification procedure, Guideline
7th meeting	25-Feb	Protocol check sheet, Self Declaration Form
8th meeting	25-Mar	Protocol check sheet, Self Declaration Form, schedule

Certification SWG members :

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

Board meeting

date	Main Agenda
10-Apr	2015 General Assembly, organizational structure
24-Apr	2015 budget, , organizational structure
14-May	2015 General Assembly, high power extension
29-May	2015GA report, high power extension, V2H Certification test
26-Jun	V2H Certification test , pacemaker test report, Collaboration with EVPOSSA
14-Jul	2nd CHAdEMO-EVPOSSA meeting
29-Jul	V2H Certification test , pacemaker test report, IEEE activity report, organizational structure
25-Aug	3rd CHAdEMO-EVPOSSA meeting
4-Sep	Issues of technical WGs, IEEE activity report, organizational structure
9-Oct	Technical workshop report, CHAdEMO Europe GA, organizational structure
29-Oct	4th CHAdEMO-EVPOSSA meeting
6-Nov	Issues of technical WGs, European market report, METI project report
4-Dec	High power extension, IEC report, V2X installation guideline, organizational structure
22-Dec	5th CHAdEMO-EVPOSSA meeting
5-Feb	Issues of technical WGs, IEC report, organizational structure
11-Mar	Issues of technical WGs, organizational structure, 2016 General Assembly

Board members : Nissan, Mitsubishi motors, Toyota, Subaru, HONDA, HITACHI, Panasonic, TEPCO