



**CHAdEMO**

# 2010 Annual report

(March 15, 2010 – March 31, 2011)

CHAdEMO Association

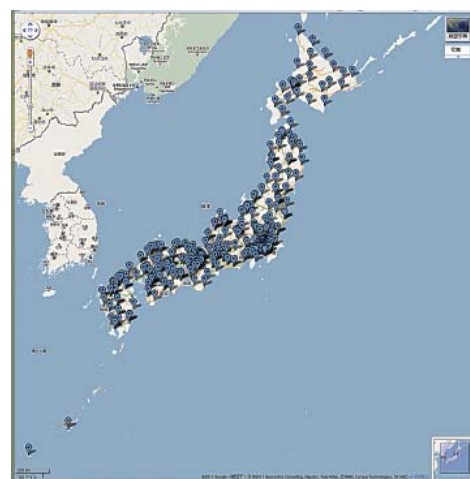
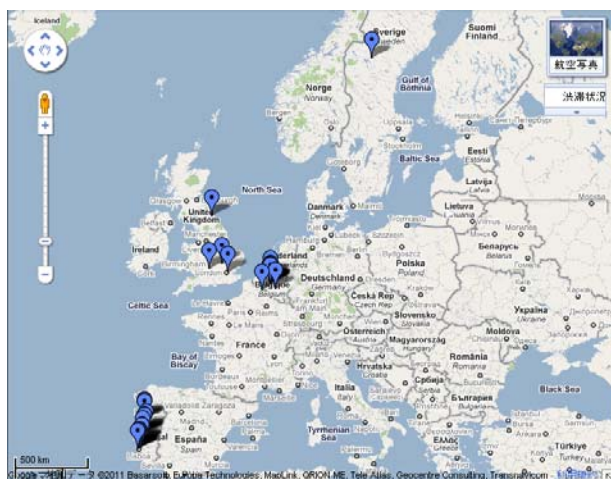
# CHAdEMO: Our Glocal Impacts

CHAdEMO is not a mere concept.

Rather, CHAdEMO is ready for use from *today*.

Riding the boom in Electric Vehicle, the sales of products deploying CHAdEMO protocol have steadily expanded.

There are **623 quick chargers** around the world as of March 31, 2011. The number of installed chargers is **582** in Japan, **41** in other countries, and more to come in 2011.



# CHAdEMO makes EVs more available and reachable to society

## CHAdEMO Quick Chargers

Since March 2010 when CHAdEMO association was established, the number of manufacturers selling or developing CHAdEMO DC quick chargers has increased from 5 to more than 20.

					
SGTE (France)	ABB (Switzerland)	EVTRONIC (France)	Epyon (Netherlands)	Efacec (Portugal)	Aerovironment (America)
					
Aker Wade (America)	MAGNUM CAP (Portugal)	GH Electrotermia (Spain)	DBT (France)	Hasetec	Takaoka
					
Takasago	Tempearl	Kyuki	ULVAC	SINFONIA TECHNOLOGY	Nichicon
					
Nissan	GS Yuasa	JFE Engineering	Kikusui	NTT Facilities	Fuji Electric

## CHAdeMO compatible EVs

Following Mitsubishi Motors Corporation's i-MiEV and Fuji Heavy Industries' Subaru Plug-in Stella, Nissan Motor Company has released LEAF in 2010. Toyota iQ based EV will also come onto the market in 2012.

In Europe, Protoscar LAMPO2, Peugeot iON and Citroen C-ZERO have hit the market. THINK and Microvette are going to release their EVs this year.



Subaru Plug-in STELLA



Mitsubishi i-MiEV



Nissan LEAF



Protoscar LAMPO2



Peugeot iON



Citroen C-ZERO



TOYOTA iQ-based EV



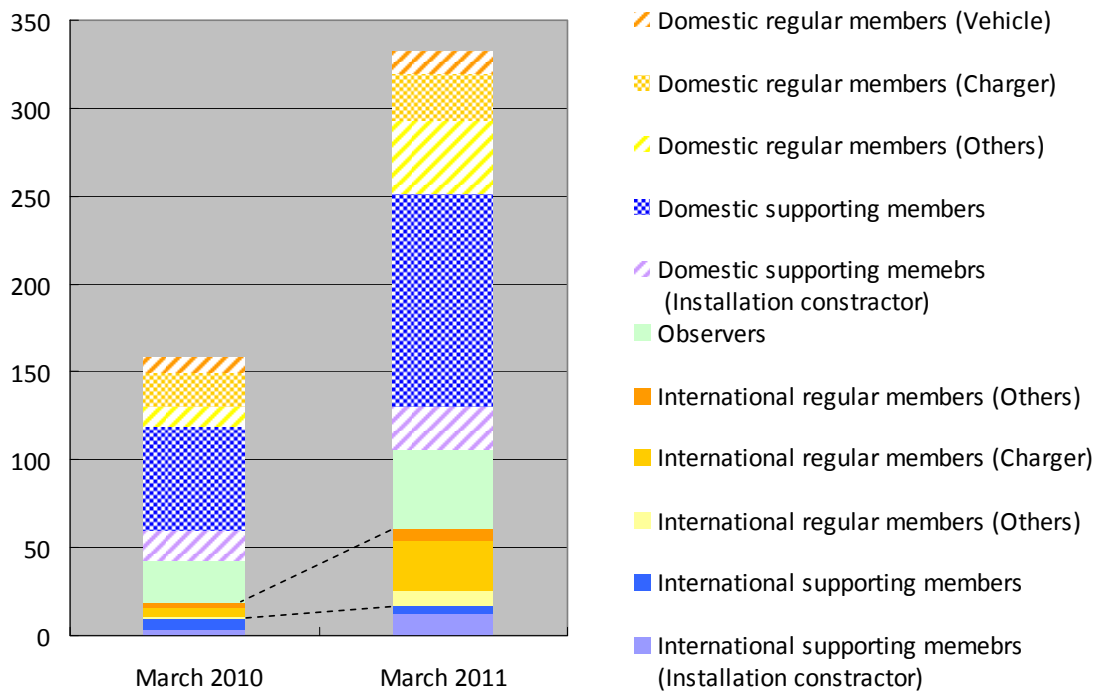
THINK City



Micro-Vett Fiorino

## Profiles of Our Members

Starting with 158 companies and organizations in March 2010, the membership of the association has amounted to 332 as of the end of March 2011. Among all, the international regular members have marked the highest growth rate. It confirms that CHAdeMO protocol is attracting the world's interest



# Key Accomplishments in 2010

## Activities for international standardization

Participation in international meetings in fiscal 2010 (in cooperation with JARI)

15-Jul IEC TC69/61851-23 (Brussels)

The first conference of 61851-23 was held to discuss specifications of DC charging station. At the conference, we described the technology of CHAdeMO protocol in detail. Mr Serge Roy (CHAdeMO Association) became the chairman of 61851-23.

30-Sep IEC TC69/61851-23 (Osaka)

As well as second conference of 61851-23, the first conference of SC23H/PT62196-3 was held to discuss DC connectors. Germany and U.S. first proposed the combo connector combining AC and DC.

10-Nov IEC TC69/61851-24 (Hong Kong)

Informal meeting of 61851-24 was held to discuss DC charging protocol. Japan (CHAdeMO), US, Germany and China, explained their proposals.

10-Mar IEC TC69/61851-24 (Paris)

The first conference of 61851-24 was held.

## Development of CHAdeMO protocol certification system

We have advanced the CHAdeMO protocol certification process in conjunction with the revision of specification document.

We have completed the development of prototype machines and tools for the certification. In accordance with the revision of specification, the software will be revised in 2011.

## Information sharing of quick charger locations

- 1) Working with Japanese government, Institute for Land and Infrastructure Management (NILIM) of MLIT, we have started the test operation of information sharing system of charger locations in Japan.
- 2) Based on the information from the members, the charger locations are continuously updated on CHAdeMO website.

## Formulation of safety measure and installation handbook

In cooperation with the members who participated in the drafting WG, “Quick Charger Installation Guide” was completed and posted on CHAdeMO website in December.

## CHAdeMO logomark

The CHAdeMO logomark is registered in 36 countries and regions listed in Annex1. Since CHAdeMO Association is a voluntary organization, Tokyo Electric Power Company gained the property right on behalf of CHAdeMO Association, and concluded a contract to have an exclusive right to use the trademark with the association.

# Activities in 2010

CHAdEMO was vigorously engaged in hosting executive meetings, technology and infrastructure workshops and promotion around the world.

	2010 April	May	June	July	August	September	October	November	December	2011 January	February	March		
Executive meeting	★ (15-Mar) General Assembly (Establishment ceremony)	★ 1st (2-Apr) Annual plan, trademark, property	★ 2nd (20-May) Review of the Bylaw, discussion on certification process	★ 3rd (6-Jul) Review of the Bylaw, contract to transfer the trademark and property	★ 1st CHAdEMO North America meeting	★ 4th (5-Aug) Draft revision of the Bylaw, draft standard specification			★ 1st CHAdEMO Europe meeting	★ 5th (20-Dec) Countermeasure against failures	★ 2nd CHAdEMO North America meeting	★ 6th (16-Feb) DC charging business	★ 2nd CHAdEMO Europe meeting	★ 7th (30-Mar) 2011 activity plan
Technology workshop	★ Issue of Technical Specifications Rev0.9	★ 1st Technology Workshop (11-May) Management policy, Explanatory meeting of the certification process		★ 3-Aug	★ 12-Aug	★ 26-Aug	★ 11-Aug, 2010 ... 29-Mar, 2011		★ (22-Nov) UL certification seminar					
Certification test		★ Sansha electric	★ ULVAC	★ Nissan	★ SGTE (France)	★ Nichicon	★ Hasetec	★ EFACEC (Portugal)	★ Takaoka	★ Nittetsu Elex	★ ULVAC	★ EVTRONIC (France)	★ GS Yuasa	
								★ Takasago	★ AeroVironment (US)	★ AkerWade (US)	★ Kyuki	★ Epyon (Netherlands)	★ Shindengen	★ Sinfonia
Infrastructure workshop	★ 1st (19-Apr) Strategy for information sharing of charger locations	★ 2nd (27-May) ERDA demonstration report, Discussion of response to Fire Service Act	★ 3rd (8-Jul) Smart grid, infrastructure in multilevel car parking tower	★ 4th (22-Sep) EV town case report	★ 5th (24-Nov) LEAF, standardization trend, members-only system WG	★ 6th (26-Jan) Coupler Development	★ 7th Technology against lightning							
PR				★ Preparation of CHAdEMO logomark operation manual			★ Opening CHAdEMO English website	★ eCarTech (Munich 21-Oct)	★ EVS25 (Shenzhen 5-Nov)	★ Release of quick charger installation guide (17-Dec)	★ Opening of CHAdEMO Chinese website (17-Dec)		★ Geneva Motor Show (3-Mar)	



## International Activities

In Europe, 1st CHAdEMO Europe meeting was held in July 2010. At the meeting, it was decided to establish the steering committee led by PSA, Nissan, Mitsubishi Motors, Think, Endesa, ESB, ABB and the city of Amsterdam. INOVOS and Protoscar will support its operation and communication.

In North America, 1st and 2nd CHAdEMO North America meetings were held in July 2010 and January 2011, respectively.

- ✓ eCarTech Munich (10/21) CHAdEMO leaflets were distributed.

### Eine gewinnbringende 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. User laden ihre Batterien langsam nachts zu Hause auf, oder tagsüber an ihren Arbeitsstellen. Da die Batterien genügend Reichweite garantieren, um fast alle notwendigen Strecken zu bewältigen, sollte das öffentliche Ladenetz sinnvoll mit einer Kombination aus langameren Ladestellen und Schnellladestellen ausgestattet sein. Die strategisch gestreuten Schnellladestellen werden eine Schlüsselrolle bei der Bewältigung der Reichweitenangst spielen.

Global infrastructure costs incurred are minimal. EV users slow-charge their batteries at home at night, or at their places of work by day. Since the batteries have enough range to cover almost any whole day's driving distance, it makes sense, for a public charge network, to split resources between 'slow-charge' points and 'quick-charging' points. Those quick-charging points, strategically placed, will play a key role to reassure customers and make them feel more confident with their cars.

### 500 CHAdEMO Ladestellen bereits eingerichtet 500 CHAdEMO stations already installed

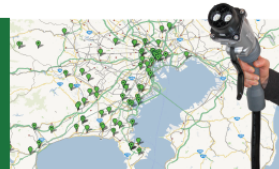
Bisher wurden bereits über 500 Ladestellen eingerichtet. Für Japan und andere Teile der Welt bestehen ambitionöse Pläne für viele weitere, sobald die ersten kompatiblen Elektrofahrzeuge den Markt durchdringen. User von Elektrofahrzeugen aller jetzigen CHAdEMO-Mitglieder können bereits heute davon profitieren. Die CHAdEMO-Infrastruktur ist in Europa in der Umsetzungsphase, die ersten Installationen gibt es landesweit in Irland und Portugal, einige lokale Stationen gibt es in Nord-Ost-England, Belgien und in der Innenstadt von Amsterdam.

EVs produced by all the current members of the CHAdEMO association can already be connected to this shared quick-charge infrastructure; some 500 stations have already been installed, and there are ambitious plans for many more within a few months of the appearance of the first compatible EVs on the market. In Europe the CHAdEMO infrastructure is in the implementation phase, the first examples can be found at national level in Ireland and Portugal and at local level in North East England, Belgium and city of Amsterdam.

Deutsch  
English



CHAdEMO



#### Kontakte:

Japanisches Sekretariat des Verbandes  
Japanische Mitglieder  
e-info@chademo.com  
Europäische Vertretung  
European Representatives  
INOVOS  
chademo@inovos.fr  
Europäisches Marketing und Kommunikation  
European marketing and communication  
PROTOSCAR SA  
chademo@protoscar.com

www.chademo.com

CHAdEMO Association

DC Schnell-Ladestandard  
DC Fast Charge standard



www.chademo.com

- ✓ EVS25 Shenzhen (11/5)
- ✓ Geneva Motor Show (3/3) Poster presentation at CHAdEMO booth





## *One North East*

Front-runner in the electric vehicle sector North East England is leading the UK in the development of electric vehicles and has an international reputation in the field. The region is adopting a joined up approach and has put in place a comprehensive infrastructure which includes skills development, supply chains, R&D and manufacturing. Vehicle trials are currently taking place, charging points are being installed and testing infrastructure is being developed.



## *City of Amsterdam*

The City of Amsterdam has identified quick charging as one of the necessary additional charging options to complete the infrastructure. With the launch of the CHAdeMO protocol and fast charging standard, Amsterdam stepped up the plan and the city is now working on a network of public quick charging stations in Amsterdam and the Netherlands. The ambition is to create 20 fast charging stations in Amsterdam in the coming 3 years.

## Activities in Japan

CHAdEMO Association attended EV promotion activities, meetings and exhibitions sponsored by national and local governments. The major activities are as follows.

- 26-Apr-2010 1st E-KIZUNA forum in Saitama
- 15-Jul-2010 Chubu charger infrastructure promotion conference
- 19-Aug-2010 Kinki block EV conference
- 3-Sep-2010 Hamamatsu industry innovated center new generation vehicle seminar
- 5-Sep-2010 Kashiwazaki EVPHV symposium
- 30-Nov-2010 2nd Chubu charger infrastructure promotion conference
- Dec-2010 Future vehicle research center symposium (Toyohashi University of technology)
- 4-Feb-2011 Symposium on EV/PGV-friendly communities (METI and MLIT)
- 11-Feb-2011 Gunma analog technology promotion forum
- 3-Mar-2011 Lecture at Fuji industrial technology support center
- 8-Mar-2011 JAPAN SHOP amenity seminar (Nikkei Inc.)



Kashiwazaki EVPHV symposium



JAPAN SHOP Exhibitions

## Technology Workshop

After holding the 1st technology workshop in July 2010, the task team had 15 meetings to discuss the revision of specifications. The revised version, “Technical Specifications of Quick Charger Rev.1.0”, will be available at the end of April.

Specifications study meetings

	Date	Participants
1st	3-Aug	22
2nd	12-Aug	37
3rd	26-Aug	32
		91

Meetings by Specification Task Team

	Date	Major topic
1st	20-Aug	Action policy of task team
2nd	31-Aug	Technology, quality of the specifications
3rd	7-Sep	Tasks regarding EMC
4th	7-Oct	Surge when the EV relay is on
5th	28-Oct	Evaluation of the effect on pacemakers
6th	12-Nov	Countermeasures for half-locked coupler, EMC
7th	26-Nov	Countermeasures for connector failure
8th	10-Dec	EV relay welding detection, isolation class
9th	22-Dec	F/B on draft specifications (rev.1.0)
10th	25-Jan	Update of draft specifications (rev.1.0)
11th	2-Feb	Update of draft specifications (rev.1.0)
12th	15-Feb	Countermeasures for half-locked coupler, Update of draft specifications
13th	28-Feb	Update of draft specifications
14th	25-Mar	Earthing conductor break, communication flow
15th	29-Mar	Earthing conductor break, main flow

Participant in specifications TT: 11 companies

Toyota, Nissan, Mitsubishi, Fuji electric, Tokyo Electric power, Takaoka, Hasetec, Takasago, Nittetsu elex, Chugoku electric power, Yazaki parts

## Infrastructure Workshop

Infrastructure workshops were held 7 times, and 1,500 members in total have attended. The following reports are available on CHAdeMO website.


- ✓ Quick Charger Installation Guide (2010/12/17)
- ✓ Task and Improvement to install charger facilities in large parking lot (2011/2/24)
- ✓ Report of the meeting with the Fire Department regarding QC installation (2011/3/11)

Infrastructure Workshops

	Date	Participants	Major topic
1st	19-Apr	202	Information sharing of charger locations
2nd	27-May	214	Demonstration of next-generation SS
3rd	8-Jul	238	Charger infrastructure for large parking lot
4th	22-Sep	225	Report of EV+PHV town
5th	24-Nov	250	Report of standardizaion activity
6th	26-Jan	234	Status report of connector development
7th	4-Mar	156	Report of countermeasure technology against lightning
		1,519	

# Annex 1: Trademark

Trademark	
Japan registration number	5263132, 5335449
U.S registration (application) number	3737220, 1028030
EU registration (application) number	1001642, 1028030
China registration (application) number	1001642, 1028030
Korea registration (application) number	1001642, 1028030
Singapore registration (application) number	0911093H, 1028030
Australia registration number	1323442, 1346135
Russia registration (application) number	1001642, 1028030
Brazil registration (application) number	830359419, 830359435, 830487565
India registration (application) number	1846914, 1846915, 1901344
Canada registration (application) number	TMA774,585, TMA783,138
New Zealand registration number	810436, 817430
Taiwan registration (application) number	01404394, 01419131
Hong Kong registration (application) number	301507653
Malaysia registration (application) number	2010016633, 2010016632, 2010016634
UAE registration (application) number	150222, 150223, 150224
Brunei registration (application) number	
Indonesia registration (application) number	D00.2010.044123, D00.2010.044124, D00.2010.044125
Cambodia registration (application) number	KH/39639/10, KH/39640/10, KH/39641/10
Laos registration (application) number	22634, 22635, 22636
Myanmar registration (application) number	4/9595/2010, 4/9596/2010
Philippines registration (application) number	4-2010-501741
Thailand registration (application) number	790352, 790353, 790354
Viet Nam registration (application) number	1001642, 1028030

Chile registration (application) number	931890, 931889
Colombia registration (application) number	10-157597, 10-157600, 10-157602
Ecuador registration (application) number	0238577, 0238578, 0238579
Mexico registration (application) number	1139677, 1139678, 1139679
Peru registration (application) number	440545, 440546, 440547
Switzerland registration (application) number	1001642, 1028030
Turkey registration (application) number	1001642, 1028030
Algeria registration (application) number	103303
Egypt registration (application) number	100164, 1028030
Morocco registration (application) number	1001642, 1028030
Mauritius registration (application) number	MU/M/10/12571
South Africa registration (application) number	2010/28179, 2010/28180, 2010/28181
Mark	
Goods • Services	<p>Category 9 Battery chargers for electric vehicles;  Electrical power supplies for electric cars</p> <p>Category 12 Automobiles and their parts and fittings</p> <p>Category 39 Electricity distribution for electric vehicles</p>