Chademo becomes Chaoji

Japan and China cooperate in standardizing charging of e-vehicles. The new Chaoji standard will be backward compatible to Chademo.

Already mid of last year, the Japanese Chademo association and the China Electricity Council (CEC) agreed to join forces in the development of ultra-fast charging standardization (Photo: Chademo association)

The collaboration of Chademo (Japan) and CEC (China) was mentioned in the plenary session of the Japan-China Forum 2018, in front of over 1000 government officials and business leaders from both countries, with the presence of the Prime Ministers Li Keqiang from China and Shinzo Abe from Japan. Chademo's Representative Board Member, Takafumi Anegawa presented an overview and the objectives of the agreement.

The two organizations will develop jointly a CAN-based protocol to communicate between ultra-fast DC chargers and batteries. The legacy charging protocols by Chademo and CEC also used CAN communication, but with different application layers. The new e-vehicle charging standard is named Chaoji. The technical specification is not yet fixed. Other interested parties are invited to join this standardization activity. The new specification is intended to be ready by 2020. In the agreement it is stated that backward compatibility with Chademo is agreed.

Chademo is consortium of automotive, power generation, and IT companies. The installation base of Chademo's DC charger is 22 000 devices. CEC has developed the GB/T standard, which is used in about 27 000 charging units. The Chaoji chargers are expected to provide 900 kW. They are intended to charge heavy-duty vehicles. A 450-kWh battery can be charged in just 30 min. This high-power charging requires new connectors and cables, which needs a liquid cooling.

The Chaoji standard will be based on CAN communication. It is intended to use the same communication methods for high-power and low-power charging. Low-end chargers are between 2 kW and 20 kW. They are used to charge scooter, forklifts, and other light-electric vehicles.

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