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**Abstract**

**Title: Inductive Power Transfer Technology for V2X Applications**

The penetration rate of Electric vehicles (EVs) into the transport sector is becoming high. Inevitably such high level of penetration will also bring some challenges to the electric power industry. One potential solution of high promise is the vehicle-to-X (V2X) technology that enables EVs to be used as an energy storage to offer services through vehicle-to-home (V2H), vehicle-to-grid (V2G), vehicle-to-building (V2B) and vehicle-to-load (V2L) concepts. For all V2X applications, EVs essentially require a bi-directional power interface either with the electricity network (grid) or load to allow for both storing (charging) and retrieval (discharging) of energy. This can be achieved by both wired and wireless means but the latter, based primarily on Inductive Power Transfer (IPT) technology, is becoming more popular being convenient, safe, and ideal for both stationary and dynamic charging of EVs. The seminar discusses the challenges and future directions of V2X technologies, and presents the latest advances in bi-directional wireless power transfer (BD-WPT) technology developed for V2X applications .