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(54) **WIRELESS POWER TRANSMISSION SYSTEM WITH ADAPTIVE DYNAMIC SAFETY MANAGEMENT**

(71) Applicant: **Wi-Charge Ltd.**, Rehovot (IL)

(72) Inventors: **Lior Golan**, Ramat Gan (IL); **Yoav Biderman**, Tel Aviv (IL); **Ran Sagi**, Tel Aviv (IL); **Ortal Alpert**, Ness Ziona (IL); **Ori Refael Mor**, Tel Aviv (IL)

(73) Assignee: **Wi-Charge Ltd.**, Rehovot (IL)

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(57) **ABSTRACT**

Methods and systems for safely and effectively supplying a beam of wireless power from a transmitter to at least one receiver. A delta signal is generated by repeatedly calculating the difference in power between the power of the beam emitted by the transmitter and the amount of power received at the receiver. The system dynamically generates a time delay, which is a time period shorter than the maximal exposure duration relating to safe exposure durations for the power level of the delta signal. If the time delay is exceeded, the system changes an operational parameter of the system, such as terminating the beam. Because of limitations to building a perfect timing system, the system is built to be more sensitive to time delays having longer safe exposure durations, with large delta signals having short safe exposure durations being responded to immediately and without significant regard to the time delay.