US 20220360119A1

(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2022/0360119 A1**

Chou et al. (43) **Pub. Date: Nov. 10, 2022**

(54) **CHARGING DEVICE AND METHOD FOR POSITIONING ELECTRONIC DEVICE**

(71) Applicant: **LUXSHARE-ICT CO., LTD.**, Taipei City (TW)

(72) Inventors: **Shih Hsiao Chou**, Taipei City (TW); **Kai Yuan Cheng**, Taipei City (TW); **Ta Yu Lin**, Taipei City (TW)

(73) Assignee: **LUXSHARE-ICT CO., LTD.**, Taipei City (TW)

(21) Appl. No.: **17/486,931**

(22) Filed: **Sep. 28, 2021**

(30) **Foreign Application Priority Data**

May 6, 2021 (CN) 202110491629.0

Publication Classification

(51) **Int. Cl.**

H02J 50/90	(2006.01)
G01S 5/04	(2006.01)
H04R 1/10	(2006.01)

(52) **U.S. Cl.**

CPC ***H02J 50/90*** (2016.02); ***G01S 5/04*** (2013.01); ***H04R 1/1025*** (2013.01)

(57) **ABSTRACT**

The disclosure provides a charging device and a method for positioning an electronic device. The method includes: in response to determining that a positioning request signal from an electronic device is received, enabling multiple antennas; controlling each antenna to receive a first radio frequency signal broadcast by the electronic device, and determining an arrival angle of the first radio frequency signal and a distance between the electronic device and the charging device based on the first radio frequency signal received by each antenna; and determining a relative position between the charging device and the electronic device based on the arrival angle and distance.