

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2024/0214093 A1 KIM et al.

Jun. 27, 2024 (43) **Pub. Date:**

(54) PROPAGATION CHANNEL SIMULATION METHOD AND APPARATUS

(71) Applicant: **ELECTRONICS AND TELECOMMUNICATIONS** RESEARCH INSTITUTE, Daejeon

(KR)

(72) Inventors: Jun Seok KIM, Daejeon (KR); Jong

Soo LIM, Daejeon (KR); Young Jun CHONG, Daejeon (KR); Ju Yeon

HONG, Daejeon (KR)

(73) Assignee: **ELECTRONICS AND**

TELECOMMUNICATIONS RESEARCH INSTITUTE, Daejeon

(21) Appl. No.: 18/514,179

(22)Filed: Nov. 20, 2023

(30)Foreign Application Priority Data

Dec. 26, 2022 (KR) 10-2022-0184976

Publication Classification

(51) Int. Cl. H04B 17/391 H04B 17/00

(2006.01)(2006.01)

(52)U.S. Cl.

CPC H04B 17/3912 (2015.01); H04B 17/0087 (2013.01)

(57)**ABSTRACT**

Exemplary embodiments provide a method of correcting a result of a ray tracing-based propagation channel simulation. The method of correcting propagation channel simulation data, includes: determining an intensity error value of a propagation channel simulation model for a propagation path associated with each object in a space for which a three-dimensional (3D) environment map is given and storing the intensity error value in a storage device; performing a propagation channel simulation for an arbitrary pair of a transmitter position and a receiver position in the space to obtain multipath components; determining an object having influenced propagations of the multipath components in the space; and correcting an intensity of at least one of the multipath components by applying the intensity error value associated with a determined object stored in the storage

