

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2024/0214415 A1 Kerr et al.

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

(54) NETWORK BASED HYPERLOCAL AUTHENTICATION

- (71) Applicant: LOYALTY IOT, INC., Reno, NV (US)
- Inventors: Michael A. Kerr, Reno, NV (US); Jesus P. Espinoza, Las Vegas, NV (US)
- (21)Appl. No.: 18/402,477
- (22) Filed: Jan. 2, 2024

Related U.S. Application Data

- (63) Continuation of application No. 18/100,460, filed on Jan. 23, 2023, now Pat. No. 11,876,830, which is a continuation of application No. 17/208,801, filed on Mar. 22, 2021, now Pat. No. 11,570,205.
- (60) Provisional application No. 62/992,886, filed on Mar. 20, 2020, provisional application No. 62/992,887, filed on Mar. 20, 2020, provisional application No. 62/992,888, filed on Mar. 20, 2020.

Publication Classification

(51) Int. Cl. H04L 9/40 (2006.01)H04L 65/102 (2006.01)H04L 67/55 (2006.01)

U.S. Cl. CPC H04L 63/145 (2013.01); H04L 63/0421 (2013.01); H04L 63/0876 (2013.01); H04L 63/1416 (2013.01); H04L 63/20 (2013.01); H04L 65/102 (2013.01); H04L 67/55

(57)ABSTRACT

A network based hyperlocal authentication system and method is described. A wireless client device requests a key from a remote network component. The remote network component generates and transmits the key to the gateway. The gateway then transmits the key to the client device application with a gateway short-range transceiver. The wireless client device receives the key from the gateway and then requests and receives a cryptographic material from the remote network component. The wireless client device communicates with the remote network component with the key, received from the gateway, and the cryptographic material, received from the network component.

