

US010142900B2

(12) United States Patent Draznin et al.

(54) PACKET DATA NETWORK GATEWAY HANDOFF

(71) Applicant: Verizon Patent and Licensing Inc., Arlington, VA (US)

(72) Inventors: **Sagiv Draznin**, Walnut Creek, CA (US); **Lalit R. Kotecha**, San Ramon,

CA (US); Patricia R. Chang, San Ramon, CA (US); Deepak Kakadia, Santa Clara, CA (US); Arda Aksu,

Martinez, CA (US)

(73) Assignee: Verizon Patent and Licensing Inc.,

Basking Ridge, NJ (US)

(*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35 U.S.C. 154(b) by 287 days.

(21) Appl. No.: 15/085,365

(22) Filed: Mar. 30, 2016

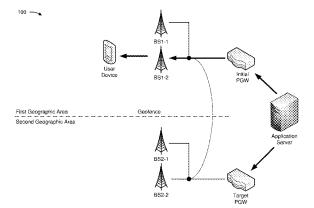
(65) Prior Publication Data

US 2016/0302120 A1 Oct. 13, 2016

Related U.S. Application Data

(60) Provisional application No. 62/144,030, filed on Apr. 7, 2015.

(51) **Int. Cl.** *H04W 36/12* (2009.01) *H04W 88/16* (2009.01)



(10) Patent No.: US 10,142,900 B2

(45) **Date of Patent:** Nov. 27, 2018

(52) **U.S. Cl.** CPC *H04W 36/12* (2013.01); *H04W 88/16* (2013.01)

(58) Field of Classification Search

CPC H04W 36/12; H04W 88/16 See application file for complete search history.

(56) References Cited

U.S. PATENT DOCUMENTS

| 2012/0063300 | A1* | 3/2012 | Sahin | H04W 36/12 |
|--------------|-----|--------|----------|------------|
| | | | | 370/225 |
| 2015/0200735 | A1* | 7/2015 | Tjahjono | H04H 20/72 |
| | | | | 370/312 |

* cited by examiner

Primary Examiner — Andrew Lai Assistant Examiner — M Mostazir Rahman

(57) ABSTRACT

A device may determine that a user device, connected to a first packet data network gateway (PGW) associated with a first area, is located in a second area associated with a second PGW. The first PGW may be associated with a provider network. The second PGW may be associated with the provider network. The user device may not be connected to the second PGW. The device may cause the user device to be disconnected from the first PGW and connected to the second PGW. The user device may remain connected to the provider network when disconnecting from the first PGW and connecting to the second PGW.

20 Claims, 12 Drawing Sheets

