#### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

# (19) World Intellectual Property **Organization**

International Bureau

08 April 2021 (08.04.2021)







(10) International Publication Number WO 2021/068006 A3

(51) International Patent Classification:

**H04J 13/16** (2011.01) **H04J 11/00** (2006.01) **H04B 17/309** (2015.01) H04W 24/08 (2009.01) H04W 68/02 (2009.01) **H04L 5/00** (2006.01)

(21) International Application Number:

PCT/US2021/013429

(22) International Filing Date:

14 January 2021 (14.01.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/984,073

02 March 2020 (02.03.2020)

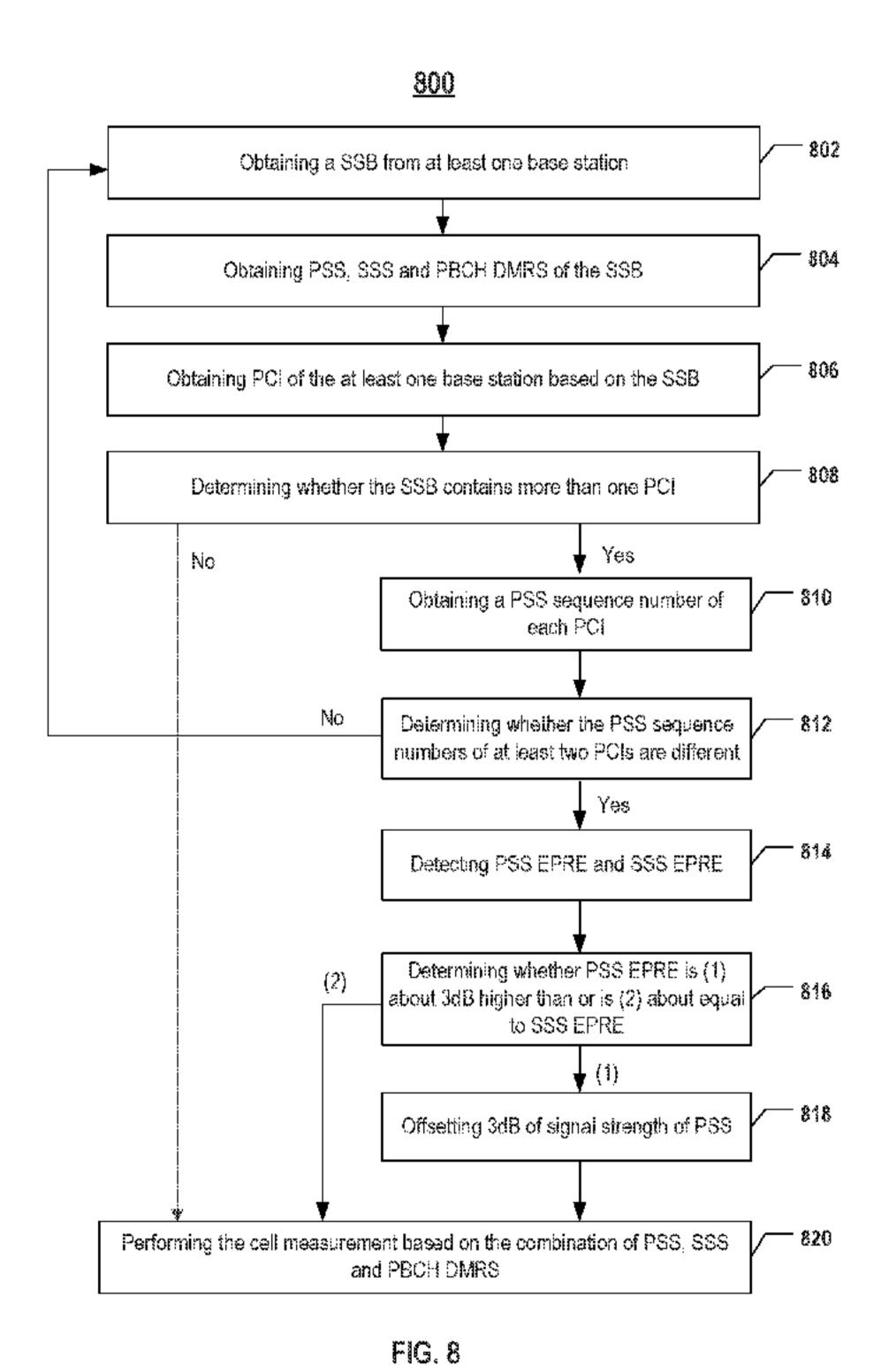
US

- (71) Applicant: ZEKU, INC. [US/US]; 2479 Bayshore Road, #260, Palo Alto, CA 94303 (US).
- (72) Inventors: WANG, Yuanye; 3313 Valley Square Ln., San Jose, CA 95117 (US). **HOU, Ping**; 39255 Walnut Ter., Fremont, CA 94536 (US).
- (74) Agent: ZOU, Zhiwei; BAYES PLLC, 1765 Greensboro Station Place, Suite 900, McLean, VA 22102 (US).
- Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, IT, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

## (54) Title: CELL MEASUREMENT BASED ON PRIMARY SYNCHRONIZATION SIGNAL



(57) Abstract: A terminal device includes at least one processor and memory storing instructions. The instructions, when executed by the at least one processor, cause the terminal device at least to obtain a Synchronization Signal/ Physical Broadcast Channel (PBCH) Block (SSB) from at least one base station; obtain a Primary Synchronization Signal (PSS), a Secondary Synchronization Signal (SSS) and a PBCH Demodulation Reference Signal (DMRS) of the SSB; and perform a cell measurement based on a combination of the PSS, the SSS, and the PBCH DMRS.



#### **Published:**

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))
- upon request of the applicant, before the expiration of the time limit referred to in Article 21(2)(a)

## (88) Date of publication of the international search report:

03 June 2021 (03.06.2021)

## INTERNATIONAL SEARCH REPORT

International application No. PCT/US21/13429

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	LASSIFICATION OF SUBJECT MATTER - H04J 13/16; H04B 17/309; H04L 5/00; H04J 11/00; H04W 24/08; H04W 68/02 (2020.01)		
CPC - H04J 11/0076; H04J 11/0073; H04J 11/0069; H04J 11/0079; H04J 11/0086; H04B 17/309; H04J 13/16; H04W 24/08; H04L 5/0023; H04L 5/005; H04W 68/02; H04W 76/28			
According to International Patent Classification (IPC) or to both national classification and IPC			
B. FIELDS SEARCHED			
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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) See Search History document			
C. DOCUMENTS CONSIDERED TO BE RELEVANT			
Category*	Citation of document, with indication, where appro	opriate, of the relevant passages	Relevant to claim No.
X	WO 2020/041196 A1 (INTEL CORPORATION) 27 Fe [0019]-[0029], [0033], [0044], [0045], [0047], claim 1	bruary 2020; abstract, paragraphs	1, 10-11, 14, 19 
Y			2-3, 7, 12, 15, 17
Α			4-6, 8-9, 13, 16, 18, 20
Y US 2017/0181065 A1 (ZTE WINSTRON TELECOM AI [0034]-[0036], [0040], [0050], claims 1 & 15		B) 22 June 2017; paragraphs [0029],	2-3, 7, 12, 15, 17
Α			4-6, 8-9, 13, 16, 18, 20
Α	US 2019/0223163 A1 (LG ELECTRONICS INC.) 18 July 2019; paragraph [0116]		1-20
Α	US 2020/0015214 A1 (SAMSUNG ELECTRONICS CO., LTD.) 09 January 2020; see entire document		1-20
Α	US 2020/0022068 A1 (QUALCOMM INCORPORATED) 16 January 2020; see entire document		1-20
Α	US 2019/0363809 A1 (LG ELECTRONICS INC.) 28 November 2019; see entire document		1-20
Further	documents are listed in the continuation of Box C.	See patent family annex.	
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the priority date claimed  Date of the actual completion of the international search		Date of mailing of the international search report	
30 March 202	21 (30.03.2021)	APR 1 2 2021	
		Authorized officer	
Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-8300		Shane Thomas  Telephone No. PCT Helpdesk: 571-272-4300	
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Form PCT/ISA/210 (second sheet) (July 2019)