



- (51) International Patent Classification:
H04B 1/69 (2011.01)
- (21) International Application Number:
PCT/CN2021/126659
- (22) International Filing Date:
27 October 2021 (27.10.2021)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
17/080,917 27 October 2020 (27.10.2020) US
- (71) Applicant: **HUAWEI TECHNOLOGIES CO.,LTD.**
[CN/CN]; Huawei Administration Building, Bantian, Long-
gang District, Shenzhen, Guangdong 518129 (CN).
- (72) Inventors: **BAYESTEH, Alireza**; 112 Beaverbrook Lane,
Ottawa, Ontario K2k 1l8 (CA). **TADAYON, Navid**; Unit
201-2 The Parkway, Kanata, Ontario K2k 0j4 (CA). **MA,**

Jianglei; 3 Bon Echo Crescent, Ottawa, Ontario K2m 2w5
(CA).

- (81) 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,

- (54) Title: METHODS AND SYSTEMS FOR SENSING-ASSISTED CHANNEL ESTIMATION

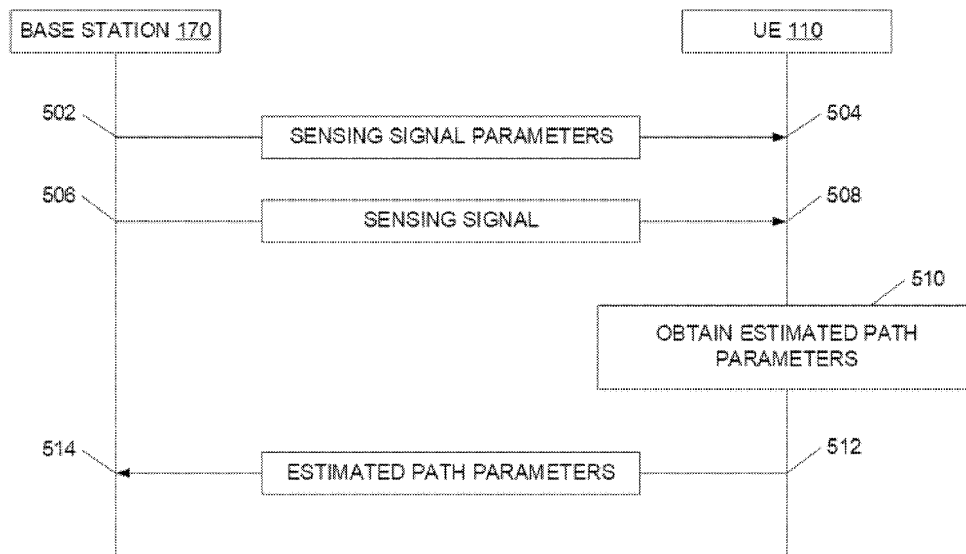


FIG. 5

(57) Abstract: Some embodiments of the present disclosure provide for use of a linear chirp signal as a basis for a sensing signal. Modification of the linear chirp signal by a signature function can allow a receiver of the sensing signal to determine an identity for a source of the sensing signal. Accordingly, upon processing the received sensing signal to obtain path parameter estimates, the receiver can direct a transmission of an indication of the path parameter estimates to the source of the sensing signal. Aspects of the present application relate to performing multi-node, multi-path channel estimation on the basis of processing the received sensing signal. Conveniently, the processing is performed with low complexity.

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).

Declarations under Rule 4.17:

- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:

- *with international search report (Art. 21(3))*