

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
29 February 2024 (29.02.2024)



(10) International Publication Number
WO 2024/044790 A2

(51) International Patent Classification:
G01S 17/88 (2006.01)

SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, KM, ML, MR, NE, SN, TD, TG).

(21) International Application Number:
PCT/US2023/073026

Published:

— without international search report and to be republished
upon receipt of that report (Rule 48.2(g))

(22) International Filing Date:
28 August 2023 (28.08.2023)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/373,595 26 August 2022 (26.08.2022) US
63/379,873 17 October 2022 (17.10.2022) US

(71) Applicant: **NEYE SYSTEMS, INC.** [US/US]; 2600 Tenth
Street, Suite 402, Berkeley, California 94710 (US).

(72) Inventors: **WU, Ming Chiang A.**; 2600 Tenth Street, Suite
402, Berkeley, California 94710 (US). **SEOK, Tae Joon**;
2600 Tenth Street, Suite 402, Berkeley, California 94710
(US). **KANEDA, Noriaki**; 2600 Tenth Street, Suite 402,
Berkeley, California 94710 (US). **ZHANG, Xiaosheng**;
2600 Tenth Street, Suite 402, Berkeley, California 94710
(US). **KWON, Kyungmok**; 2600 Tenth Street, Suite 402,
Berkeley, California 94710 (US).

(74) Agent: **THOMAS, Justin**; Shay Glenn LLP, 155 Bovet
Road, Suite 710, SAN MATEO, California 94402 (US).

(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, CV, CZ, DE, DJ, DK, DM,
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG,
KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY,
MA, MD, MG, MK, MN, MU, 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, CV,
GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, 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, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE,

(54) Title: LIDAR SYSTEMS AND METHODS

(57) Abstract: The present disclosure is directed to imaging LiDARs that can include a FPSA beam scanner and a lens. One or both of the FPSA beam scanner and lens can be moved laterally to increase a lateral resolution of the LiDAR system. Some embodiments can include a microlens disposed between the FPSA beam scanner and the lens. Methods of use are also provided.

WO 2024/044790 A2