

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
22 June 2023 (22.06.2023)



(10) International Publication Number
WO 2023/112017 A1

(51) International Patent Classification:

G01S 13/88 (2006.01) F41H 13/00 (2006.01)
F41H 11/02 (2006.01) G01S 13/06 (2006.01)
G01S 13/66 (2006.01) G08G 5/00 (2006.01)
G01S 13/86 (2006.01)

(21) International Application Number:

PCT/IL2022/051223

(22) International Filing Date:

16 November 2022 (16.11.2022)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

289133 19 December 2021 (19.12.2021) IL

(71) Applicant: ELTA SYSTEMS LTD. [IL/IL]; 100 Yitzchak
Hanassi Blvd., P.O.B. 330, 7710201 Ashdod (IL).

(72) Inventors: FRENKEL, Noam; 40 Hateena Street,
9979700 Karmey Yosef (IL). SHARON, Erez; 3 Alon
Street, 9979700 Karmei Yosef (IL). STEINMETZ,
Josef; 6 Netanyahu Street, 5442303 Givat Shmuel (IL).
ROVINSKY, Jacob; 8 Hut Hashani Street, 7174824 Modi-
in (IL).

(74) Agent: TAUBER, Gilad; Reinhold Cohn and Partners,
P.O. Box 13239, 6113102 Tel Aviv (IL).

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

(54) Title: SYSTEM AND METHOD FOR RADAR SYSTEM DEFENSE

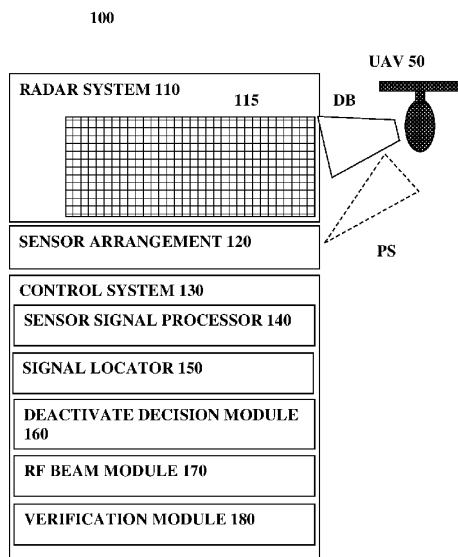


FIG. 1

(57) Abstract: A system and corresponding method are presented. The system comprising a primary radar system comprising one or more phased array antenna systems, a sensor arrangement, and a control system. The sensor arrangement comprises one or more sensors configured for collecting sensing data indicative of presence and location of one or more unmanned aerial vehicles (UAV's) within a predetermined region, and to provide said sensing data to the control system. The control system comprises at least one processor configured for processing the sensing data, determining a need to deactivate score for the one or more UAV's, and generating operational instructions to the primary radar system for generating deactivation beam directed toward location of said one or more UAV's, thereby deactivating said one or more UAV's.

[Continued on next page]

Declarations under Rule 4.17:

— *of inventorship (Rule 4.17(iv))*

Published:

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