

(51) International Patent Classification:
G01S 3/80 (2006.01)(21) International Application Number:
PCT/IL2013/050360(22) International Filing Date:
25 April 2013 (25.04.2013)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
219409 25 April 2012 (25.04.2012) IL
222678 25 October 2012 (25.10.2012) IL(71) Applicant: **ELTA SYSTEMS LTD.** [IL/IL]; 100
Yitzhak Hanassi Blvd., P.O.B. 330, 77102 Ashdod (IL).(72) Inventor: **TIDHAR, Gil**; 5 Izdarechet Street, 71700 Modi-
in (IL).(74) Agent: **HAUSMAN, Ehud**; Reinhold Cohn and Partners,
P.O.B. 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, CZ, DE, DK, DM,
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,
KR, KZ, LA, LC, LK, LR, LS, LT, 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, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ,
TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, 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, 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,
ML, MR, NE, SN, TD, TG).**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))

(88) Date of publication of the international search report:
12 June 2014

(54) Title: ESTIMATING A SOURCE LOCATION OF A PROJECTILE

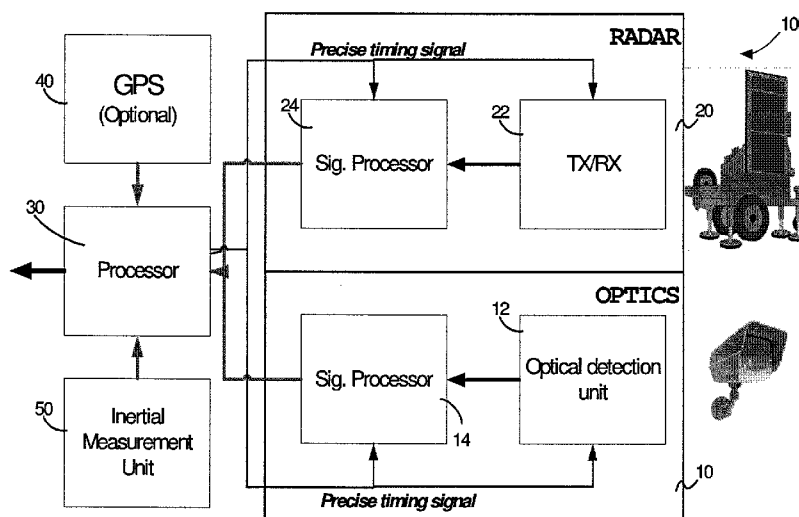


FIG. 2

(57) **Abstract:** According to examples of the presently disclosed subject matter, there is provided a system for estimating a source location of a projectile, comprising an optics subsystem, a radar subsystem and a processor. The processor is adapted to use range and velocity measurements obtained from data provided by the radar subsystem, a source direction and an event start time obtained from data provided by the optical subsystem and a predefined kinematic model for the projectile for estimating a range to a source location of the projectile.