

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
16 December 2004 (16.12.2004)

PCT

(10) International Publication Number
WO 2004/109323 A2

(51) International Patent Classification⁷: **G01S 7/495**, 7/36

(21) International Application Number:
PCT/IL2004/000475

(22) International Filing Date: 3 June 2004 (03.06.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
156313 4 June 2003 (04.06.2003) IL
156897 13 July 2003 (13.07.2003) IL
60/539,599 29 January 2004 (29.01.2004) US

(71) Applicant (for all designated States except US): **ELOP ELECTRO-OPTICAL INDUSTRIES LTD.** [IL/IL];
Kiryat Weizman, P.O. Box 1165, 76111 Rehovot (IL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **ANSCHER, Israel**

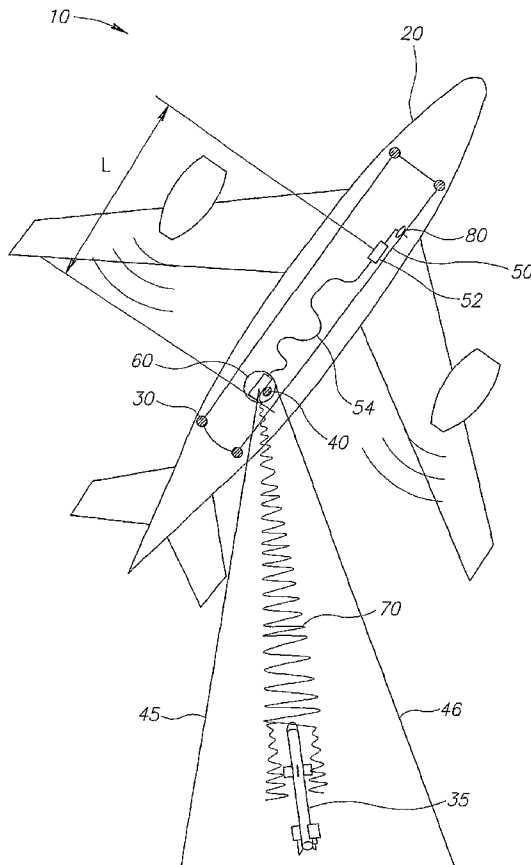
[IL/IL]; 22 HaLamedHeh Street, 44394 Kfar Saba (IL). **KRUPKIN, Vladimir** [IL/IL]; 27/5 Reuven & Bat Sheva Street, 75357 Rishon LeZion (IL). **LOVETT, Andrew** [IL/IL]; 8/32 HaShalom Street, 44377 Kfar Saba (IL). **SACKS, Zachary** [IL/IL]; 13/3 Yitzhak Rabin Blvd., 71700 Modi'in (IL). **CHOMSKI, Doron** [IL/IL]; 14/4 Gorodetzky Street, 76227 Rehovot (IL). **SCHIFFER, Zeev** [IL/IL]; 38 Trumpeldor Street, 49203 Petach Tikva (IL). **GROSSMAN, Kuti** [IL/IL]; 14 Shenef Street, 81511 Yavne (IL). **LURIA, Elena** [IL/IL]; 1/37 Brener Street, 55201 Kiryat Ono (IL). **DAVID, Doron** [IL/IL]; Or HaNer, 79190 Mobile Post Ashkelon (IL). **SHOSHAN, Itamar** [IL/IL]; 17 Hakhita Street, 56275 Yehud (IL).

(74) Agents: **EITAN, PEARL, LATZER & CO-HEN-ZEDEK** et al.; 7 Shenkar Street, 46725 Herzlia (IL).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,

[Continued on next page]

(54) Title: **FIBER LASER BASED JAMMING SYSTEM**



(57) Abstract: A DIRCM (Direct IR Counter Measures) system is described that includes a detection and warning means for detecting a missile that might pose a threat on the platform to which said system is allocated, and generating a warning of its existence. The warning may include data that enable the calculation of the expected direction from which the missile is approaching. The DIRCM system may also include acquisition means for performing acquisition of the approaching missile in accordance with the data provided by the detection and warning means, and issuing data that may enable the calculation in real time of the updated position of the missile, a fiber laser means for generating a laser beam, and a motion and aiming enabled turret means, coupled with the laser means, for directing the laser beam unto the approaching missile. The laser beam may be generated in accordance with its the missile's updated position as calculated based on the data received from the acquisition means, and processing means, linked to the detection and warning means, and also to the acquisition means, the laser means and the turret means.

WO 2004/109323 A2



CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.