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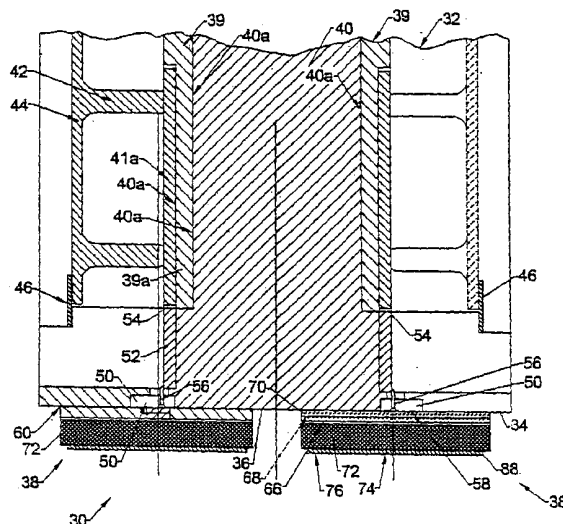
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[Continued on next page]

(54) Title: PHASED ARRAY ANTENNA WITH INTERCONNECT MEMBER FOR ELECTRICALLY CONNECTING OR-
THOGONALLY POSITIONED ELEMENTS USED AT MILLIMETER WAVELENGTH FREQUENCIES



(57) Abstract: A phased array antenna includes an antenna housing including a subarray assembly and a plurality of beam forming modules positioned on the subarray assembly. An antenna support and interconnect member are mounted on the antenna housing and include a carrier member having a front antenna mounting surface substantially orthogonal to the module support for supporting at least one antenna element. A rear surface has a receiving slot. At least one conductive via is associated with the receiving slot and positioned to extend through the carrier member to a circuit element, such as an antenna element, supported by the mounting surface. A launcher member is fitted into the receiving slot and has a module connecting end that extends rearward to a beam forming network.



WO 02/07263 A3

**Declarations under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, 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, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW. ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW). Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM). European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR). OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

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

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A. CLASSIFICATION OF SUBJECT MATTER

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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	LOEFFLER D ET AL: "RF INTERCONNECTS BASED ON ELECTROMAGNETIC COUPLING FOR THE TRANSITION BETWEEN COMPONENTS IN HIGHLY INTEGRATED SAR-SYSTEMS ELEKTROMAGNETISCH GEKOPPELTE HF-UEBERGAENGE FUER DIE VERBINDUNG VONKOMPONENTEN IN HOCHINTEGRIERTEN SAR-SYSTEMEN" FREQUENZ, SCHIELE UND SCHON GMBH. BERLIN, DE, vol. 53, no. 7/8, July 1999 (1999-07), pages 146-150, XP000920020 ISSN: 0016-1136	1-4, 10, 11
A	page 147, right-hand column, line 11 - line 25; figures 4,5	5,8
A	US 6 061 228 A (PALMER EDWARD G ET AL) 9 May 2000 (2000-05-09) column 4, line 17 - line 31; figure 1	2,11
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Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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Z document member of the same patent family

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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