

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
22 May 2009 (22.05.2009)

PCT

(10) International Publication Number
WO 2009/063062 A3

(51) International Patent Classification:

G01S 1/00 (2006.01)

(21) International Application Number:

PCT/EP2008/065578

(22) International Filing Date:

14 November 2008 (14.11.2008)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

07120808.6 15 November 2007 (15.11.2007) EP

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(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, BR, BW, BY, BZ, CA, CH, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

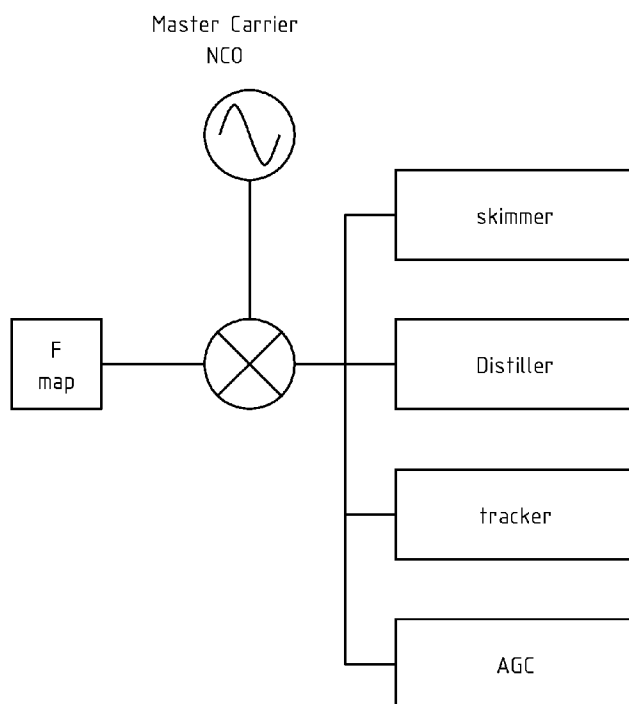
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, 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:

— with international search report

[Continued on next page]

(54) Title: GNSS RECEIVER AND SIGNAL TRACKING CIRCUIT AND SYSTEM



(57) Abstract: A GNSS platform architecture with advanced tracking and search engines. The tracking and search functions are separated into 2 independent engines each highly optimized for their targeted functions.

Figure 1

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— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

(88) Date of publication of the international search report:

30 July 2009

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2008/065578

A. CLASSIFICATION OF SUBJECT MATTER

INV. G01S1/00

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)
G01S

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2004/202235 A1 (KOHLI SANJAI [US] ET AL) 14 October 2004 (2004-10-14) figures 2,3,5,22 paragraph [0121] - paragraph [0122] paragraph [0142] - paragraph [0143] paragraph [0324] paragraph [0326] - paragraph [0327] -----	1,2,4, 6-8,11, 15
X	EP 0 924 532 A (IMEC VZW [BE]) 23 June 1999 (1999-06-23) figures 2,3,5,9 paragraph [0053] paragraph [0062] paragraph [0068] - paragraph [0069] ----- -/--	1-4,6-8, 11,15

☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

Date of the actual completion of the international search

24 March 2009

Date of mailing of the international search report

02/06/2009

Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2008/065578

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 600 670 A (TURNEY PAUL F [US]) 4 February 1997 (1997-02-04) figures 7,10 column 8, line 37 - column 9, line 30 column 9, line 61 - column 10, line 13 -----	3
A	EP 0 501 829 B1 (TEXAS INSTRUMENTS INC [US]) 16 June 1999 (1999-06-16) figures 8-11 paragraph [0060] - paragraph [0070] -----	4,6,11
A	US 2006/133463 A1 (PIETILA SAMULI [FI] ET AL PIETILAE SAMULI [FI] ET AL) 22 June 2006 (2006-06-22) the whole document -----	4,6,11

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2008/065578

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-4, 6-8, 11 and 15

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-4, 6-8, 11 and 15

A GNSS processor in which one or more taps can be disabled from the computation to conserve power. The processor applies DFT computation for signal acquisition and tracking and channel chaining is used for flexible channel configuration.

1.1. claims: 1, 2, 4, 6, 7, 8, 11 and 15

A GNSS processor in which one or more taps can be disabled from the computation to conserve power. The processor applies DFT computation for signal acquisition and tracking.

1.2. claim: 1 and 3

A GNSS processor in which one or more taps can be disabled from the computation to conserve power. Channel chaining is used for flexible channel configuration.

2. claims: 1,9 and 10

A GNSS processor with multisystem capabilities in which one or more taps can be disabled from the computation to conserve power.

3. claims: 1, 5 and 12

A GNSS processor in which one or more taps can be disabled from the computation to conserve power. The processor provides coherent integration alignment capabilities for preserving the integration results.

4. claims: 1 and 19-22

A GNSS processor in which one or more taps can be disabled from the computation to conserve power. The processor provides start-up synchronisation between correlators which further reduces the power consumption and the computational load.

5. claim: 13 and 14

A GNSS processor providing multi-stage carrier Wipeoff capabilities.

6. claims: 16-18

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

A GNSS processor with DFT signal processing in which the DFT calculation order is selected in a manner to reduce the computational load.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2008/065578

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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