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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/055,259	03/25/2008	Mark Montgomery	069987-081/D074	7480

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EXAMINER	
NGUYEN, HOANG V	
ART UNIT	PAPER NUMBER
2821	

MAIL DATE	DELIVERY MODE
10/20/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	12/055,259	MONTGOMERY ET AL.	
	Examiner	Art Unit	
	HOANG V. NGUYEN	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 March 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *5-20* is/are allowed.

6)☒ Claim(s) *1-4* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 March 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/8/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Ho et al (US 5,955,997).

Regarding claim 1, Ho (Figure 4, col 3 lines 29-31) discloses an antenna comprising a dielectric tubular member 100; a second conductive material 240 forming an exterior surface of the tubular member; the second conductive material defining a slot 180 therein, the slot having a slot length approximately equal to one-half of a guided wavelength and having a slot width; and a feed 200 proximate the slot for establishing currents in the second conductive material when the antenna is in a transmitting mode, the currents perpendicular to the slot length. The limitation "for placement in an opening within a first conductive material" recited in the preamble was not given any patentable weight.

Regarding claim 2, as applied to claim 1, Ho (Figure 4) teaches that the guided wavelength is related to a free space wavelength of a signal transmitted or received by the antenna, a dielectric constant of a material inside the tubular member and a dielectric constant of a material outside the tubular member.

Regarding claim 4, as applied to claim 1, Figure 4 of Ho shows that a width of the opening defined by the first conductive material is less than a quarter wavelength of the guided wavelength.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ho et al.

Ho discloses the claimed invention except explicitly mention that the dielectric constant of the dielectric tubular member is greater than about ten. It would have been obvious to one having ordinary skill in the art at the time the invention was made to configure the dielectric tubular member with a dielectric constant to be greater than ten, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Allowable Subject Matter

5. Claims 5-20 are allowed.

6. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 5, Ho discloses an antenna comprising a dielectric tubular member; a second conductive material forming an exterior surface of the tubular member; the second

conductive material defining a slot therein, a slot length approximately equal to one-half of a guided wavelength; and a feed connected to the transmitting and receiving circuits and disposed proximate the slot for establishing currents in the second conductive material when the antenna is in a transmitting mode. Ho, however, fails to further teach that the antenna being received in an opening defined in an element; the element comprising first conductive material disposed proximate the opening; and that the element being disposed in a communications device for sending and receiving an information signal.

Claims 6-20 are allowed for depending on claim 5.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- US 3,852,994 discloses a slot antenna apparatus.
- US 4,328,502 discloses a slot antenna disposed in a tubular waveguide.
- US 6,636,181 discloses a slot antenna disposed in a portable computer.
- US 2007/0194994 discloses a slot antenna disposed in a portable computer.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HOANG V. NGUYEN whose telephone number is (571)272-1825. The examiner can normally be reached on Mondays-Fridays from 9:00 a.m. to 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Owens can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hoang V Nguyen/
Primary Examiner, Art Unit 2821