



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/119,133	04/09/2002	John T. Apostolos	4571 US	7567

22500 7590 04/04/2003
BAE SYSTEMS INFORMATION AND
ELECTRONIC SYSTEMS INTEGRATION INC.
65 SPIT BROOK ROAD
P.O. BOX 868 NHQ1-719
NASHUA, NH 03061-0868

EXAMINER

CLINGER, JAMES C

ART UNIT PAPER NUMBER

2821

DATE MAILED: 04/04/2003

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

Office Action Summary

Application No.

10/119,133

Applicant(s)

Apostolos

Examiner

Jim Clinger

Art Unit

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 three MONTH(S) 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 the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- 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 Apr 9, 2002
- 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) 1-24 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-13 and 18-24 is/are rejected.
- 7) Claim(s) 14-17 is/are objected to.
- 8) Claims _____ 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 Apr 9, 2002 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).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgement 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.
- 14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) Other:

Art Unit: 2821

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4-5 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4, no antecedent basis for “the side plates”.

Claim 5, no antecedent basis for “the top plate”.

Claim 18, no antecedent basis for “the first, second, third and fourth sides” and “said wavelength”. Preamble wording is unusual.

Claim Rejections - 35 USC § 102

3. 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 -

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

Art Unit: 2821

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

4. Claims 1-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Tsubaki et al.(6,100,849).

Claim 1, figures 6 and 8 disclose a top(13), a ground plane(63), and a box structure(10) on the ground plane(63) with a plurality of conductive sides(15-17 and 51-52) where one side is grounded(15 or 16) and one side is not grounded(17 or 51-52).

Claim 2, a conductive top(13) is disclosed in figure 2.

Claim 3, the conductive top(13) is insulated from the sides(15-17 and 51-52) in figure 2 because it is not directly connected to any of the sides.

Claim 4, there are slots(g2 & s1) between the sides(15-17 and 51-52) in figure 2.

Claims 5-6, a dielectric, air, is between all the gaps(s1 & g2) in figure 2.

Claim 7, the above referenced ground plane(63), top(13), and sides(15-17 and 51-52) are orientated as recited.

Claims 8-10, figure 6 discloses two sides(51 and 17) which are insulated from the ground plane(63) by a dielectric footer and have an air gap between them(s1).

Claims 11-12, two other sides(15 and 52) in spaced opposition and with an air gap between them(s1) are disclosed in figure 11.

Claim 13, the air gap(s1) is positioned between the sides(15, 17 and 51-52) as recited.

Art Unit: 2821

(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.

5. Claim 19 is rejected under 35 U.S.C. 102(b) as being anticipated by Johnston et

al.(5,784,032).

Claim 19, figure 24 discloses a ground plane(251), four conductive sides(256 and 257), and a top(252 and 254) orientated as recited.

Claim Rejections - 35 USC § 103

6. 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 negated by the manner in which the invention was made.

7. Claims 18 and 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Johnston.

Claims 18, 20 and 24, the recited side dimension is not disclosed, however it is an obvious choice of a side dimension given the disclosure(col. 6, lines 50-55) of Johnston.

Claims 21-23, figure 12 discloses a ground plane(121), top(122), and four sides with each side being connected to a feed or ground. The recited connections of the four sides are an obvious choice given the disclosure(col. 8, lines 14-51) of Johnston concerning the connection of these four sides to different potentials.

Art Unit: 2821

It would have been obvious to one of ordinary skill in the art at the time of the invention to dimension and connect the antenna elements disclosed in Johnston as recited given the disclosure of Johnston concerning the possible range of antenna element dimensions and possible antenna element connections.

Allowable Subject Matter

8. Claims 14-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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

The limitation which is primarily responsible for distinguishing these claims over the prior art is the limitation concerning the third and fourth sides being grounded.

Correspondence

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Jim Clinger whose phone number is (703) 305-0619.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center whose telephone number is (703) 308-0956.

Art Unit: 2821

Papers related to Technology Center 2800 applications only may be submitted to Technology Center 2800 by facsimile transmission. Any transmission not to be considered an official response must be clearly marked "DRAFT". The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Technology Center Fax Center number is (703) 308-7722 or (703) 308-7724.

A handwritten signature in black ink, appearing to read "J. Miller", is positioned on the right side of the page. The signature is fluid and cursive, with a long horizontal stroke extending to the right.