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08/13/2008

PTO/SB/05 (07-07)
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UTILITY PATENT APPLICATION TRANSMITTAL

(ONLY FOR NEW NONPROVISIONAL APPLICATIONS UNDER 37 CFR 1.53(B))

Attorney Docket No.	47005-P018WUSC1
First Inventor	Jaume Anguera Pros
Title	MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES
Express Mail Label No.	EM 020149567 US

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. [X] **Fee Transmittal Form** (e.g., PTO/SB/17) *(Submit an original and a duplicate for fee processing)*
2. [ ] **Applicant claims small entity status.** See 37 CFR 1.27.
3. [X] **Specification** [*Total Pages* 21] Both the claims and abstract must start on a new page *(For information on the preferred arrangement, see MPEP 608.01(a))*
4. [X] **Drawing(s)** *(35 U.S.C. 113)* [*Total Sheets* 17]
5. **Oath or Declaration** [*Total Sheets*]
   - a. [ ] Newly executed (original or copy)
   - b. [ ] A copy from a prior application (37 CFR 1.63(d)) *(for continuation/divisional with Box 18 completed)*
     - i. [ ] DELETION OF INVENTOR(S) Signed statement attached deleting inventor(s) name in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. [ ] **Application Data Sheet.** See 37 CFR 1.76
7. [ ] **CD-ROM or CD-R** in duplicate, large table or Computer Program *(Appendix)*
   - [ ] Landscape Table on CD
8. **Nucleotide and/or Amino Acid Sequence Submission** *(if applicable, items a. – c. are required)*
   - a. [ ] Computer Readable Form (CRF)
   - b. Specification Sequence Listing on:
     - i. [ ] CD-ROM or CD-R (2 copies); or ii. [ ] Paper
   - c. [ ] Statements verifying identity of above copies

ADDRESS TO:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

ACCOMPANYING APPLICATION PARTS

9. [ ] **Assignment Papers** (cover sheet & document(s))
   Name of Assignee
10. [ ] **37 CFR 3.73(b) Statement** *(when there is an assignee)* [ ] **Power of Attorney**
11. [ ] **English Translation Document** *(if applicable)*
12. [ ] **Information Disclosure Statement** (PTO/SB/08 or PTO-1449)
    - [ ] Copies of citations attached
13. [ ] **Preliminary Amendment**
14. [X] **Return Receipt Postcard** (MPEP 503) *(Should be specifically itemized)*
15. [ ] **Certified Copy of Priority Document(s)** *(if foreign priority is claimed)*
16. [ ] **Nonpublication Request** under 35 U.S.C.122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent.
17. [X] Other: First Preliminary Amendment

18. If a CONTINUING APPLICATION, *check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:*

[X] Continuation [ ] Divisional [ ] Continuation-in-part (CIP) of prior application No.: 10/584,442

Prior application information: Examiner Not Yet Assigned *Art Unit:* N/A

19. CORRESPONDENCE ADDRESS

[X] The address associated with Customer Number: 61060 *OR* [ ] Correspondence address below

Name					
Address					
City		State		Zip Code	
Country		Telephone		Email Address	

Signature		Date	August 13, 2008
Name (Print/Type)	Shoaib A. Mithani	Registration No. (Attorney/Agent)	61,654

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Dated: August 13, 2008 Signature: Toni Watkins (Toni Watkins)

5256335v.1 47005/P018WUSC1

Geotab Exhibit 1002
Geotab v. Fractus

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Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL
For FY 2008

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT ($) 1,030.00

Complete if Known	
Application Number	Not Yet Assigned
Filing Date	Concurrently Herewith
First Named Inventor	Jaume Anguera Pros
Examiner Name	Not Yet Assigned
Art Unit	N/A
Attorney Docket No.	47005-P018WUSC1

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☒ Deposit Account Deposit Account Number: 23-2426 Deposit Account Name: Winstead PC

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, **except for the filing fee**

☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments

FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

	FILING FEES		SEARCH FEES		EXAMINATION FEES		
Application Type	**Fee ($)**	**Small Entity Fee ($)**	**Fee ($)**	**Small Entity Fee ($)**	**Fee ($)**	**Small Entity Fee ($)**	**Fees Paid ($)**
Utility	310	155	510	255	210	105	1,030.00
Design	210	105	100	50	130	65	
Plant	210	105	310	155	160	80	
Reissue	310	155	510	255	620	310	
Provisional	210	105	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	**Fee ($)**	**Small Entity Fee ($)**
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	210	105
Multiple dependent claims	370	185

Total Claims	**Extra Claims**	**Fee ($)**	**Fee Paid ($)**
15 - 20 =		x	=

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims	**Extra Claims**	**Fee ($)**	**Fee Paid ($)**
2 - 3 =		x	=

HP = highest number of independent claims paid for, if greater than 3.

Multiple Dependent Claims

Fee ($)	**Fee Paid ($)**

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is $260 ($130 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	**Extra Sheets**	**Number of each additional 50 or fraction thereof**	**Fee ($)**	**Fee Paid ($)**
38 - 100 =		/50 = (round up to a whole number) x		=

4. OTHER FEE(S)

	Fees Paid ($)
Non-English Specification, $130 fee (no small entity discount)	
Other (e.g., late filing surcharge):	

SUBMITTED BY

Signature		Registration No. (Attorney/Agent)	61,654	Telephone	(214) 745-5403
Name (Print/Type)	Shoaib A. Mithani			Date	August 13, 2008

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Dated: August 13, 2008 Signature: Toni Watkins (Toni Watkins)

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Filing Date	Concurrently Herewith
First Named Inventor	Jaume Anguera Pros
Examiner Name	Not Yet Assigned
Art Unit	N/A
Attorney Docket No.	47005-P018WUSC1

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☒ Deposit Account Deposit Account Number: 23-2426 Deposit Account Name: Winstead PC

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MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES

Introduction

This invention relates generally to the field of multi-band monopole internal and external antennas. More specifically, multi-band monopole antennas are provided that are particularly well-suited for use in mobile communications devices, such as Personal Digital Assistants, cellular telephones, and pagers.

BACKGROUND

Multi-band antenna structures for use in a mobile communications device are known in this art. For example, one type of antenna structure that is commonly utilized as an internally-mounted antenna for a mobile communication device is known as an "inverted-F" antenna. When mounted inside a mobile communications device, an antenna is often subject to problematic amounts of electromagnetic interference from other metallic objects within the mobile communications device, particularly from the ground plane. An inverted-F antenna has been shown to perform adequately as an internally mounted antenna, compared to other known antenna structures. Inverted-F antennas, however, are typically bandwidth-limited, and thus may not be well suited for bandwidth intensive applications. An example of an antenna structure that is used as an externally mounted antenna for a mobile communication device is known as a space-filling or grid dimension antenna. External mounting reduces the amount of electromagnetic interference from other metal objects within the mobile communication device.

Summary

Antennas for use in mobile communication devices are disclosed. The antennas disclosed can include a substrate with a base, a top, a front side and a back side; a first conductor can be located on the first side of the antenna substrate; and a second conductor can be located on the second side of the antenna substrate. The conductors can have single or multiple branches. If a conductor is a single branch it can, for example, be a spiral conductor or a conducting plate. If a conductor has multiple branches, each branch can be set up to receive a different frequency band. A conductor with multiple branches can have a linear branch and a space-filling or grid dimension branch. A conducting plate can act as a parasitic reflector plane to tune or partially tune the resonant frequency of another conductor. The first and second conductors can be electrically connected.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a top view of an exemplary multi-band monopole antenna for a mobile communications device;

Fig. 2 is a top view of an exemplary multi-band monopole antenna including one alternative space-filling geometry;

Figs. 3-9 illustrate several alternative multi-band monopole antenna configurations;

Fig. 10 is a top view of the exemplary multi-band monopole antenna of Fig. 1 coupled to a circuit board for a mobile communications device;

Figs. 11 shows an exemplary mounting structure for securing a multi-band monopole antenna within a mobile communications device;

Fig. 12 is an exploded view of an exemplary clamshell-type cellular telephone having a multi-band monopole antenna;

Fig. 13 is an exploded view of an exemplary candy-bar-style cellular telephone having a multi-band monopole antenna; and

Fig. 14 is an exploded view of an exemplary personal digital assistant (PDA) having a multi-band monopole antenna.

Fig. 15 shows one example of a space-filling curve;

Figs. 16-19 illustrate an exemplary two-dimensional antenna geometry forming a grid dimension curve;

Fig. 20a is a perspective view of a double-sided, double-surface antenna with two spiral conductors in the absence of a substrate.

Fig. 20b is a front view of a double-sided, double-surface antenna with two spiral conductors with a substrate.

Fig. 20c is a back view of a double-sided, double-surface antenna with two spiral conductors with a substrate.

Fig. 21a is a perspective view of a double-sided, double-surface antenna with a dual branched conductor and a conducting plate in the absence of a substrate.

Fig. 21b is a front view of a double-sided, double-surface antenna with a dual branched conductor and a conducting plate with a substrate.

Fig. 21c is a back view of a double-sided, double-surface antenna with a dual branched conductor and a conducting plate with a substrate.

Fig. 22a is a front view of a Rogers-type double-sided, double-surface antenna showing a Hilbert-like space-filling conductor.

Fig. 22b is a back view of a Rogers-type double-sided, double-surface antenna showing a parasitic plate reflector.

Fig. 23a is a front view of a double-sided, double-surface antenna showing a modified Hilbert-like space-filling conductor.

Fig. 23b is a back view of a double-sided, double-surface antenna showing a parasitic plate reflector.

Fig. 24 is an example of an external antenna housing that might be fitted with one of the described antennas.

DETAILED DESCRIPTION

Referring now to the drawing figures, Fig. 1 is a top view of an exemplary multi-band monopole antenna 10 for a mobile communications device. The multi-band monopole antenna 10 includes a first radiating arm 12 and a second radiating arm 14 that are both coupled to a feeding port 17 through a common conductor 16. The antenna 10 also includes a substrate material 18 on which the antenna structure 12, 14, 16 is fabricated, such as a dielectric substrate, a flex-film substrate, or some other type of suitable substrate material. The antenna structure 12, 14, 16 is preferably patterned from a conductive material, such as a metallic thick-film paste that is printed and cured on the substrate material 18, but may alternatively be fabricated using other known fabrication techniques.

The first radiating arm 12 includes a meandering section 20 and an extended section 22. The meandering section 20 is coupled to and extends away from the common conductor 16. The extended section 22 is contiguous with the meandering section 20 and extends from the end of the meandering section 20 back to-

wards the common conductor 16. In the illustrated embodiment, the meandering section 20 of the first radiating arm 12 is formed into a geometric shape known as a space-filling curve, in order to reduce the overall size of the antenna 10. A space-filling curve is characterized by at least ten segments which are connected in such a way that each segment forms an angle with its adjacent segments, that is, no pair of adjacent segments define a larger straight segment. It should be understood, however, that the meandering section 20 may include other space-filling curves than that shown in Fig. 1, or may optionally be arranged in an alternative meandering geometry. Figs. 2-6, for example, illustrate antenna structures having meandering sections formed from several alternative geometries. The use of shape-filling curves to form antenna structures is described in greater detail in the co-owned PCT Application WO 01/54225, entitled Space-Filling Miniature Antennas, which is hereby incorporated into the present application by reference.

The second radiating arm 14 includes three linear portions. As viewed in Fig. 1, the first linear portion extends in a vertical direction away from the common conductor 16. The second linear portion extends horizontally from the end of the first linear portion towards the first radiating arm. The third linear portion extends vertically from the end of the second linear portion in the same direction as the first linear portion and adjacent to the meandering section 20 of the first radiating arm 14.

As noted above, the common conductor 16 of the antenna 10 couples the feeding port 17 to the first and second radiating arms 12, 14. The common conductor 16 extends horizontally (as viewed in Fig. 1) beyond the second radiating arm 14, and may be folded in a perpendicular direction (perpendicularly into the page), as shown in Fig. 10, in order to couple the feeding port 17 to communications circuitry in a mobile communications device.

Operationally, the first and second radiating arms 12, 14 are each tuned to a different frequency band or bands, resulting in a dual-band or multi-band antenna.

The antenna 10 may be tuned to the desired dual-band operating frequencies of a mobile communications device by pre-selecting the total conductor length of each of the radiating arms 12, 14. For example, in the illustrated embodiment, the first radiating arm 12 may be tuned to operate in a lower frequency band or groups of bands, such as PDC (800 MHz), CDMA (800 MHz), GSM (850 MHz), GSM (900 MHz), GPS, or some other desired frequency band. Similarly, the second radiating arm 14 may be tuned to operate in a higher frequency band or group of bands, such as GPS, PDC (1500 MHz), GSM (1800 MHz), Korean PCS, CDMA/PCS (1900 MHz), CDMA2000/UMTS, IEEE 802.11 (2.4 GHz), IEEE 802.16 (Wi-MAX), or some other desired frequency band. It should be understood that, in some embodiments, the lower frequency band of the first radiating arm 12 may overlap the higher frequency band of the second radiating arm 14, resulting in a single broader band. It should also be understood that the multi-band antenna 10 may be expanded to include further frequency bands by adding additional radiating arms. For example, a third radiating arm could be added to the antenna 10 to form a tri-band antenna.

Fig. 2 is a top view of an exemplary multi-band monopole antenna 30 including one alternative meandering geometry. The antenna 30 shown in Fig. 2 is similar to the multi-band antenna 10 shown in Fig. 1, except the meandering section 32 in the first radiating arm 12 includes a different curve than that shown in Fig. 1.

Figs. 3-9 illustrate several alternative multi-band monopole antenna configurations 50, 70, 80, 90, 93, 95, 97. Similar to the antennas 10, 30 shown in Figs. 1 and 2, the multi-band monopole antenna 50 illustrated in Fig. 3 includes a common conductor 52 coupled to a first radiating arm 54 and a second radiating arm 56. The common conductor 52 includes a feeding port 62 on a linear portion of the common conductor 52 that extends horizontally (as viewed in Fig. 3) away from the radiating arms 54, 56, and that may be folded in a perpendicular direction (perpendicularly into the page) in order to couple the feeding port 62 to communications circuitry in a mobile communications device.

The first radiating arm 54 includes a meandering section 58 and an extended section 60. The meandering section 58 is coupled to and extends away from the common conductor 52. The extended section 60 is contiguous with the meandering section 58 and extends from the end of the meandering section 58 in an arcing path back towards the common conductor 52.

The second radiating arm 56 includes three linear portions. As viewed in Fig. 3, the first linear portion extends diagonally away from the common conductor 52. The second linear portion extends horizontally from the end of the first linear portion towards the first radiating arm. The third linear portion extends vertically from the end of the second linear portion away from the common conductor 52 and adjacent to the meandering section 58 of the first radiating arm 54.

The multi-band monopole antennas 70, 80, 90 illustrated in Figs. 4-6 are similar to the antenna 50 shown in Fig. 3, except each includes a differently-patterned meandering portion 72, 82, 92 in the first radiating arm 54. For example, the meandering portion 92 of the multi-band antenna 90 shown in Fig. 6 meets the definition of a space-filling curve, as described above. The meandering portions 58, 72, 82 illustrated in Figs. 3-5, however, each include differently-shaped periodic curves that do not meet the requirements of a space-filling curve.

The multi-band monopole antennas 93, 95, 97 illustrated in Figs. 7-9 are similar to the antenna 30 shown in Fig. 2, except in each of Figs. 7-9 the expanded portion 22 of the first radiating arm 12 includes an additional area 94, 96, 98. In Fig. 7, the expanded portion 22 of the first radiating arm 12 includes a polygonal portion 94. In Figs. 8 and 9, the expanded portion 22 of the first radiating arm 12 includes a portion 96, 98 with an arcuate longitudinal edge.

Fig. 10 is a top view 100 of the exemplary multi-band monopole antenna 10 of Fig. 1 coupled to the circuit board 102 of a mobile communications device. The

circuit board 102 includes a feeding point 104 and a ground plane 106. The ground plane 106 may, for example, be located on one of the surfaces of the circuit board 102, or may be one layer of a multi-layer printed circuit board. The feeding point 104 may, for example, be a metallic bonding pad that is coupled to circuit traces 105 on one or more layers of the circuit board 102. Also illustrated, is communication circuitry 108 that is coupled to the feeding point 104. The communication circuitry 108 may, for example, be a multi-band transceiver circuit that is coupled to the feeding point 104 through circuit traces 105 on the circuit board.

In order to reduce electromagnetic interference or electromagnetic coupling from the ground plane 106, the antenna 10 is mounted within the mobile communications device such that 50% or less of the projection of the antenna footprint on the plane of the circuit board 102 intersects the metalization of the ground plane 106. In the illustrated embodiment 100, the antenna 10 is mounted above the circuit board 102. That is, the circuit board 102 is mounted in a first plane and the antenna 10 is mounted in a second plane within the mobile communications device. In addition, the antenna 10 is laterally offset from an edge of the circuit board 102, such that, in this embodiment 100, the projection of the antenna footprint on the plane of the circuit board 102 does not intersect any of the metalization of the ground plane 106.

In order to further reduce electromagnetic interference or electromagnetic coupling from the ground plane 106, the feeding point 104 is located at a position on the circuit board 102 adjacent to a corner of the ground plane 106. The antenna 10 is preferably coupled to the feeding point 104 by folding a portion of the common conductor 16 perpendicularly towards the plane of the circuit board 102 and coupling the feeding port 17 of the antenna 10 to the feeding point 104 of the circuit board 102. The feeding port 17 of the antenna 10 may, for example, be coupled to the feeding point 104 using a commercially available connector, by bonding the feeding port 17 directly to the feeding point 104, or by some other suitable

coupling means, such as for example a built-in or surface-mounted spring contact. In other embodiments, however, the feeding port 17 of the antenna 10 may be coupled to the feeding point 104 by some means other than folding the common conductor 16.

Fig. 11 shows an exemplary mounting structure 111 for securing a multi-band monopole antenna 112 within a mobile communications device. The illustrated embodiment 110 employs a multi-band monopole antenna 112 having a meandering section similar to that shown in Fig. 2. It should be understood, however, that alternative multi-band monopole antenna configurations, as described in Figs 1-9, could also be used.

The mounting structure 111 includes a flat surface 113 and at least one protruding section 114. The antenna 112 is secured to the flat surface 113 of the mounting structure 111, preferably using an adhesive material. For example, the antenna 112 may be fabricated on a flex-film substrate having a peel-type adhesive on the surface opposite the antenna structure. Once the antenna 112 is secured to the mounting structure 111, the mounting structure 111 is positioned in a mobile communications device with the protruding section 114 extending over the circuit board. The mounting structure 111 and antenna 112 may then be secured to the circuit board and to the housing of the mobile communications device using one or more apertures 116, 117 within the mounting structure 111.

Fig. 12 is an exploded view of an exemplary clamshell-type cellular telephone 120 having a multi-band monopole antenna 121. The cellular telephone 120 includes a lower circuit board 122, an upper circuit board 124, and the multi-band antenna 121 secured to a mounting structure 110. Also illustrated are an upper and a lower housing 128, 130 that join to enclose the circuit boards 122, 124 and antenna 121. The illustrated multi-band monopole antenna 121 is similar to the multi-band antenna 30 shown in Fig. 2. It should be understood, however, that

alternative antenna configurations, as describe above with reference to Figs. 1-9, could also be used.

The lower circuit board 122 is similar to the circuit board 102 described above with reference to Fig. 10, and includes a ground plane 106, a feeding point 104, and communications circuitry 108. The multi-band antenna 121 is secured to a mounting structure 110 and coupled to the lower circuit board 122, as described above with reference to Figs. 10 and 11. The lower circuit board 122 is then connected to the upper circuit board 124 with a hinge 126, enabling the upper and lower circuit boards 122, 124 to be folded together in a manner typical for clam-shell-type cellular phones. In order to further reduce electromagnetic interference from the upper and lower circuit boards 122, 124, the multi-band antenna 121 is preferably mounted on the lower circuit board 122 adjacent to the hinge 126.

Fig. 13 is an exploded view of an exemplary candy-bar-type cellular telephone 200 having a multi-band monopole antenna 201. The cellular telephone 200 includes the multi-band monopole antenna 201 secured to a mounting structure 110, a circuit board 214, and an upper and lower housing 220, 222. The circuit board 214 is similar to the circuit board 102 described above with reference to Fig. 10, and includes a ground plane 106, a feeding point 104, and communications circuitry 108. The illustrated antenna 201 is similar to the multi-band monopole antenna shown in Fig. 3, however alternative antenna configurations, as described above with reference to Figs. 1-9, could also be used.

The multi-band antenna 201 is secured to the mounting structure 110 and coupled to the circuit board 214 as described above with reference to Figs. 10 and 11. The upper and lower housings 220, 222 are then joined to enclose the antenna 212 and circuit board 214.

Fig. 14 is an exploded view of an exemplary personal digital assistant (PDA) or gaming device 230 having a multi-band monopole antenna 231. The PDA 230

includes the multi-band monopole antenna 231 secured to a mounting structure 110, a circuit board 236, and an upper and lower housing 242, 244. Although shaped differently, the PDA circuit board 236 is similar to the circuit board 102 described above with reference to Fig. 10, and includes a ground plane 106, a feeding point 104, and communications circuitry 108. The illustrated antenna 231 is similar to the multi-band monopole antenna shown in Fig. 5, however alternative antenna configurations, as described above with reference to Figs. 1-9, could also be used. As discussed above with respect to Fig. 10, preferably 50% or less of the antenna footprint on the plane of the circuit board 236 intersects the metalization of the ground plane.

The multi-band antenna 231 is secured to the mounting structure 110 and coupled to the circuit board 214 as described above with reference to Figs. 10 and 11. In slight contrast to Fig. 10, however, the PDA circuit board 236 defines an L-shaped slot along an edge of the circuit board 236 into which the antenna 231 and mounting structure 110 are secured in order to conserve space within the PDA 230. The upper and lower housings 242, 244 are then joined together to enclose the antenna 231 and circuit board 236.

An example of a space-filling curve 250 is shown in Fig. 15. As mentioned above, space-filling means a curve formed from a line that includes at least ten segments, with each segment forming an angle with an adjacent segment. When used in an antenna, each segment in a space-filling curve 250 should be shorter than one-tenth of the free-space operating wavelength of the antenna.

In addition to space-filling curves, the curves described herein can also be grid dimension curves. Examples of grid dimension curves are shown in Figs. 16 to 19. The grid dimension of a curve may be calculated as follows. A first grid having square cells of length L1 is positioned over the geometry of the curve, such that the grid completely covers the curve. The number of cells (N1) in the first grid that enclose at least a portion of the curve are counted. Next, a second

grid having square cells of length L2 is similarly positioned to completely cover the geometry of the curve, and the number of cells (N2) in the second grid that enclose at least a portion of the curve are counted. In addition, the first and second grids should be positioned within a minimum rectangular area enclosing the curve, such that no entire row or column on the perimeter of one of the grids fails to enclose at least a portion of the curve. The first grid should include at least twenty-five cells, and the second grid should include four times the number of cells as the first grid. Thus, the length (L2) of each square cell in the second grid should be one-half the length (L1) of each square cell in the first grid. The grid dimension (D_g) may then be calculated with the following equation:

$$D_g = -\frac{\log(N2) - \log(N1)}{\log(L2) - \log(L1)}$$

For the purposes of this application, the term grid dimension curve is used to describe a curve geometry having a grid dimension that is greater than one (1). The larger the grid dimension, the higher the degree of miniaturization that may be achieved by the grid dimension curve in terms of an antenna operating at a specific frequency or wavelength. In addition, a grid dimension curve may, in some cases, also meet the requirements of a space-filling curve, as defined above. Therefore, for the purposes of this application a space-filling curve is one type of grid dimension curve.

Fig. 16 shows an exemplary two-dimensional antenna 260 forming a grid dimension curve with a grid dimension of approximately two (2). Fig. 17 shows the antenna 260 of Fig. 16 enclosed in a first grid 270 having thirty-two (32) square cells, each with length L1. Fig. 18 shows the same antenna 260 enclosed in a second grid 280 having one hundred twenty-eight (128) square cells, each with a length L2. The length (L1) of each square cell in the first grid 270 is twice the length (L2) of each square cell in the second grid 280 ($L2 = 2 \times L1$). An examination of Figs. 17 and 18 reveals that at least a portion of the antenna 260 is enclosed within every square cell in both the first and second grids 270, 280. Therefore, the value of N1 in the above grid dimension (D_g) equation is thirty-two (32)

(i.e., the total number of cells in the first grid 270), and the value of N2 is one hundred twenty-eight (128) (i.e., the total number of cells in the second grid 280). Using the above equation, the grid dimension of the antenna 260 may be calculated as follows:

$$D_g = -\frac{\log(128) - \log(32)}{\log(2 \times L1) - \log(L1)} = 2$$

For a more accurate calculation of the grid dimension, the number of square cells may be increased up to a maximum amount. The maximum number of cells in a grid is dependent upon the resolution of the curve. As the number of cells approaches the maximum, the grid dimension calculation becomes more accurate. If a grid having more than the maximum number of cells is selected, however, then the accuracy of the grid dimension calculation begins to decrease. Typically, the maximum number of cells in a grid is one thousand (1000).

For example, Fig. 19 shows the same antenna 260 enclosed in a third grid 290 with five hundred twelve (512) square cells, each having a length L3. The length (L3) of the cells in the third grid 290 is one half the length (L2) of the cells in the second grid 280, shown in Fig. 18. As noted above, a portion of the antenna 260 is enclosed within every square cell in the second grid 280, thus the value of N for the second grid 280 is one hundred twenty-eight (128). An examination of Fig. 19, however, reveals that the antenna 260 is enclosed within only five hundred nine (509) of the five hundred twelve (512) cells in the third grid 290. Therefore, the value of N for the third grid 290 is five hundred nine (509). Using Figs. 18 and 19, a more accurate value for the grid dimension (D_g) of the antenna 260 may be calculated as follows:

$$D_g = -\frac{\log(509) - \log(128)}{\log(2 \times L2) - \log(L2)} \approx 1.9915$$

The multi-band monopole antennas disclosed herein also include multiple conductor, double-sided, double-surface antenna arrangements. These multiple conductor, double-sided, double-surface antenna arrangements include all the aspects of the multi-band monopole antennas discussed above including, but not limited

to, the physical properties of the substrate and conductive materials. In such double-sided, double-surface antenna arrangements, conductors are located on different surfaces of an antenna substrate. Each of the conductors can have the same or different geometry. Conductors on different sides of an antenna substrate can be physically, electrically connected or they may not be connected. Conductors on different sides of an antenna substrate can be connected by a coupling mechanism, e.g., an internal passage or via containing a conductor or an external conductor. Options for conductors include, but are not limited to, conductors with space-filling or grid dimension curves as discussed above, conductors with multiple arms as discussed above, and conducting plates that acts as parasitic reflector planes to tune the resonant frequency of a second band of another conductor.

Figs. 20a, 20b and 20c show an example of a double-sided, double-surface antenna 300 with two spiral conductors (302 and 304). Fig. 20a is a perspective view of the conductors of the double-sided, double-surface antenna 200. An antenna substrate, may be included between the spiral conductors 302 and 304. Suitable antenna substrate materials are well known and may include, for example, plastic, FR4, teflon, Arlon®, Rogers®, and fiberglass. Figs. 20b and 20c are views of the front and back of the double-sided, double-surface antenna 300 including a substrate 306. Referring to Figs. 20a, 20b, and 20c, spiral conductor 302 may be located on the front face of antenna substrate 306 and spiral conductor 304 may be located on the back face of antenna substrate 306. Spiral conductor 302 is connected to a feeding port 308 and spiral conductor 302 is connected to spiral conductor 304 by connector 309. Connector 309 electrically connects spiral connectors 302 and 304 and passes through an internal passage of the antenna substrate 306.

Figs. 21a, 21b and 21c show an example of a double-sided, double-surface antenna 310 with a dual branched antenna 312, a feeding port 314, and a conducting plate 316. Fig. 21a is a perspective view of the conductors of the double-sided, double surface antenna 310. Similar to double-sided, double-surface antenna 300,

an antenna substrate may be located between the dual branched antenna 312 and the conducting plate 316. Figs. 21b and 21c are views of the front and back of the double-sided, double surface antenna 310 including a substrate 318. The dual branched antenna 312 comprises two conductors: a space-filling or grid dimension section 320 and a linear section 322 (further examples of dual and multi-band antennas are discussed above).

Conducting plate 316 can either be an extension of the space-filling or grid dimension section 320 of the dual branched antenna 312 if electrically connected to space-filling or grid dimension section 320 or a parasitic plane reflector if not electrically connected to space-filling or grid dimension section 320. If the plane 324 is used to represent a conductor electrically connecting the end of the space-filling or grid dimension section 320 of the dual branched antenna 312 to the conducting plate 316, then the conducting plate acts as an extension of the space-filling or grid dimension section 320 of the dual branched antenna 312 and will also provide some of the tuning properties of a parasitic plane reflector. If the plane 324 is not a conductor connecting the end of the space-filling or grid dimension section 320 to the conducting plate 316, then the conducting plate acts as a parasitic plane reflector. Conductors connecting the space-filling or grid-dimension section 320 to the conducting plate 316 can be any type of electrical connection and the electrical connection can occur at any points along their common length. The electrical connection also can be located in any orientation such as, for example, over the substrate surface or through an internal passage of the substrate.

Another antenna example is shown in Figs. 22a and 22b. The antenna shown in Figs. 22a and 22b is an example of a double-sided, double-surface antenna 330 with a conductor 332 and reflector 334 located on an antenna substrate 336. Antenna 330 is a Rogers-type antenna. The conductor 332 of antenna 330 has a Hilbert-like space-filling antenna that is located on the front face of substrate 336. The reflector 334, which is located on the back face of substrate 336, acts as a

parasitic plane reflector that helps to tune the resonant frequency of the conductor 332 located on the front face of substrate 336.

Figs. 23a and 23b show another example of a double-sided, double-surface antenna 350. Antenna 350 is a modification of antenna 310 shown in Figs. 21a, 21b and 21c. The first difference between antenna 350 and antenna 310 is that linear section 320 of antenna 310, i.e., linear section 352 of antenna 350, is now connected to the Hilbert-like space-filling section 354 of antenna 350 at the distal end 356 of the Hilbert-like space-filling section 354 rather than at the proximal end 358. The Hilbert-like space filling section 354 of antenna 350 can, for example, be tuned to the GSM900 frequency band and the modification to linear section 352 could help to reduce the resonant frequency of the GSM900 band. The second difference between antenna 350 and antenna 310 is that a conducting plate 360 has been added to the back face of the antenna substrate to create a parasitic plane reflector. The linear portion 352 of antenna 350 can, for example, be tuned to the GSM1800 band and the parasitic plane reflector could help tune the frequency of the GSM1800 band.

Many modifications to the antennas described above are possible. For example, the linear portions of antennas 310 or 350 could be lengthened or shortened or the electrical connection relationship with a space-filling or grid dimension conductor can be adjusted. For further example, the space-filling or grid dimension portions of antennas 310, 330 or 350 could have various curves removed or replaced by solid conductor portions. The space-filling or grid dimension portions of these antennas can also adopt any of the configurations defined above. By way of an additional example, conductor plates/parasitic plane reflectors of antennas 310, 330 or 350 can be decreased in width or height or both. Further, the shape of a conductor plate/parasitic plane reflector could be modified in other ways, such as by removing various portions of the conductor/reflector or simply creating differing shapes.

Fig. 24 shows an example of an antenna housing that any one of the antennas described above could be fitted within. Such an antenna housing could be affixed, for example, to a candy bar type mobile communication device, to a clam-shell type mobile communication device, to a gaming device, or to a PDA.

This written description uses examples to disclose the invention, including the best mode, and also to enable a person skilled in the art to make and use the invention. The patentable scope of the invention is defined by the claims, and may include other examples that occur to those skilled in the art. Such other examples, which may be available either before or after the application filing date, are intended to be within the scope of the claims if they have structural elements that do not differ from the literal language of the claims, or if they include equivalent structural elements with insubstantial differences from the literal language of the claims.

CLAIMS

What is claimed is:

1. An antenna for use in a mobile communication device, comprising:

an antenna substrate with a base, a top, a front side and a back side;

a first conductor located on the front side of the antenna substrate, said first conductor comprising a dual branched antenna with a space-filling or grid dimension branch and a linear branch; and

a second conductor located on the back side of the antenna substrate, said second conductor comprising a conducting plate.

2. The antenna of claim 1, wherein the first conductor and the second conductor are electrically connected.

3. The antenna of claim 2, wherein the first conductor and the second conductor are electrically connected through one or more holes cut in the antenna substrate.

4. The antenna of claim 1, wherein the first conductor is connected to a feeding port used to form an electrical connection between the antenna and a mobile communication device.

5. The antenna of claim 1, wherein the space-filling or grid dimension branch of the first conductor receives frequencies in the GSM900 band.

6. The antenna of claim 1, wherein the linear branch of the second conductor receives frequencies in the GSM1800 band.

7. The antenna of claim 1, wherein the second conductor acts as a parasitic plane reflector.

8. The antenna of claim 6, wherein the second conductor is positioned behind the space-filling or grid dimension branch of the dual branched conductor.

9. The antenna of claim 6, wherein the second conductor is smaller than the space-filling or grid dimension branch of the dual branched antenna and the second conductor is positioned behind a portion of the dual branched antenna.

10. The antenna of claim 1, wherein the second conductor has a non-rectangular shape.

11. The antenna of claim 1, wherein one or more curves of the space-filling or grid dimension branch of the dual branched antenna are replaced by a solid conductor portion.

12. The antenna of claim 1, wherein the linear branch of the first conductor is electrically connected to the space-filling or grid dimension branch near a proximal end of the space-filling or grid dimension branch, said proximal end of the space-filling or grid dimension branch located near the base of the antenna substrate.

13. The antenna of claim 6, wherein the linear branch of the first conductor is electrically connected to the space-filling or grid dimension branch at a distal end of the space-filling or grid dimension branch.

14. A housing for use with a mobile communication device containing the antenna of claim 6.

15. A multi-band monopole antenna for external use in a mobile communication device, comprising:

an antenna substrate with a base, a top, a front side and a back side;

a first conductor located on the front side of the antenna substrate, said first conductor comprising a dual branched antenna with a space-filling or grid dimension branch for receiving

frequencies in the GSM900 band and a linear branch for receiving frequencies in the GSM1800 band; and

a second conductor located on the back side of the antenna substrate, said second conductor comprising a conducting plate that is positioned behind the space-filling or grid dimension branch of the dual branched antenna, wherein the first conductor and the second conductor are electrically connected at the top of the antenna substrate through holes in the antenna substrate.

ABSTRACT

Antennas for use in mobile communication devices are disclosed. The antennas disclosed can include a substrate with a base, a top, a front side and a back side; a first conductor can be located on the first side of the antenna substrate; and a second conductor can be located on the second side of the antenna substrate. The conductors can have single or multiple branches. If a conductor is a single branch it can, for example, be a spiral conductor or a conducting plate. If a conductor has multiple branches, each branch can be set up to receive a different frequency band. A conductor with multiple branches can have a linear branch and a space-filling or grid dimension branch. A conducting plate can act as a parasitic reflector plane to tune or partially tune the resonant frequency of another conductor. The first and second conductors can be electrically connected.

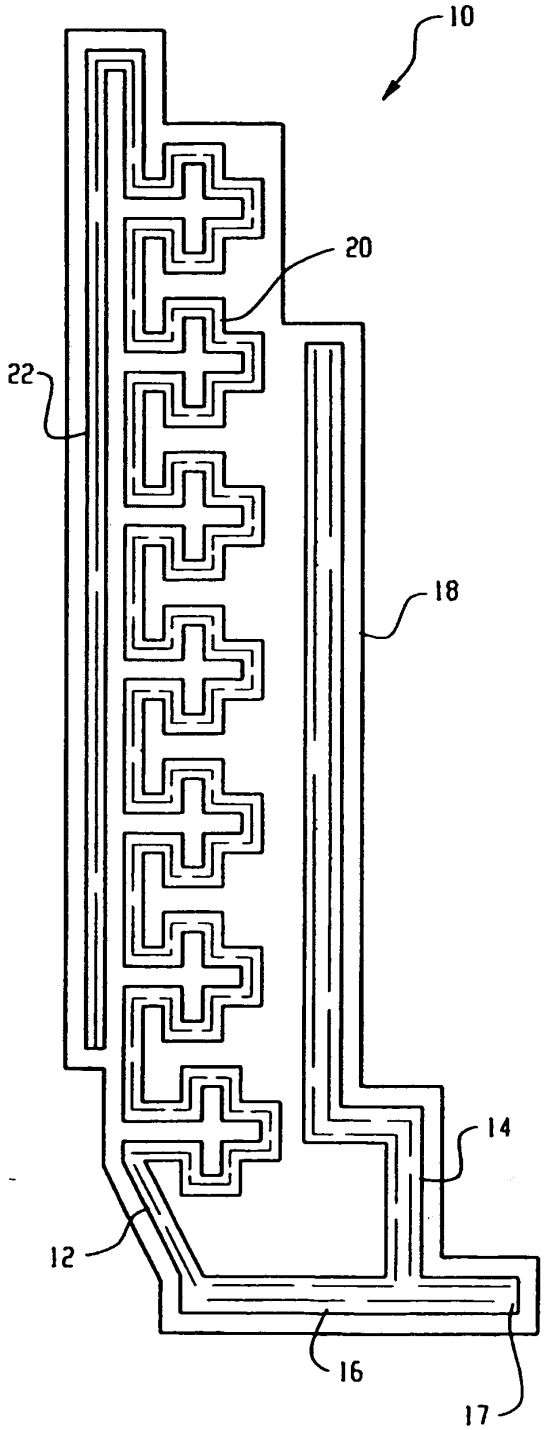


Fig. 1

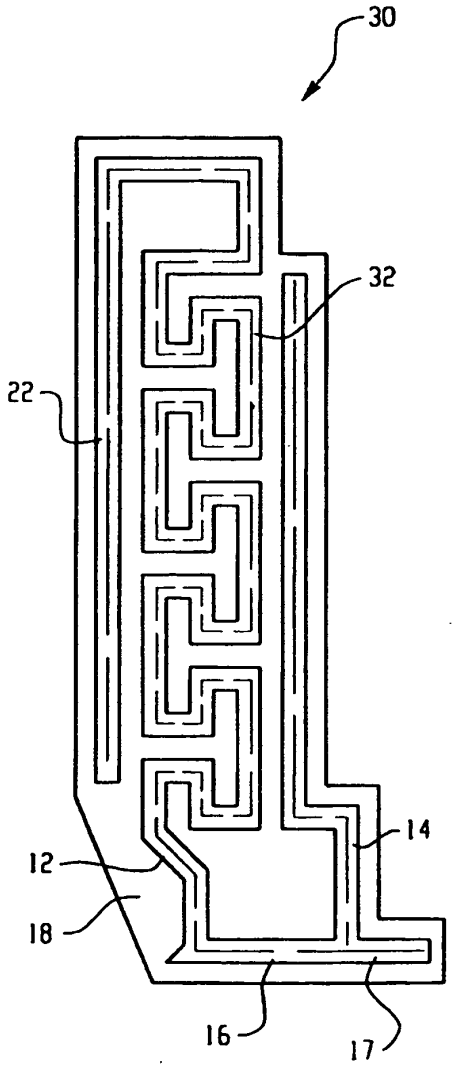


Fig. 2

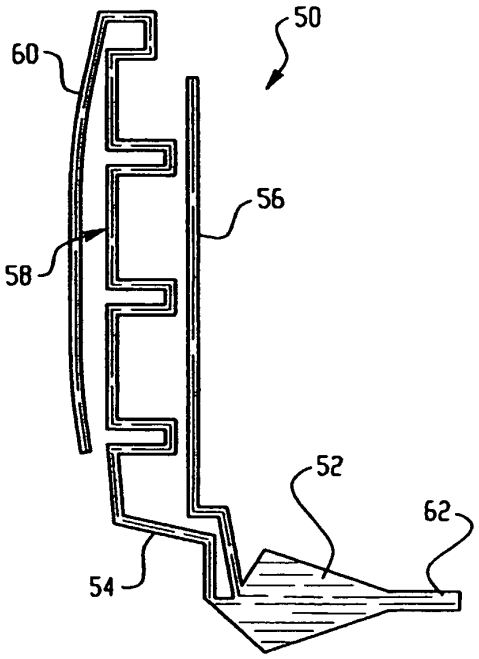


Fig. 3

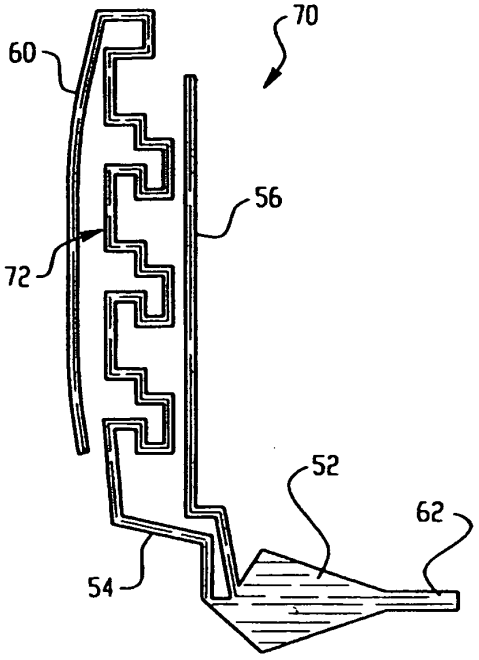


Fig. 4

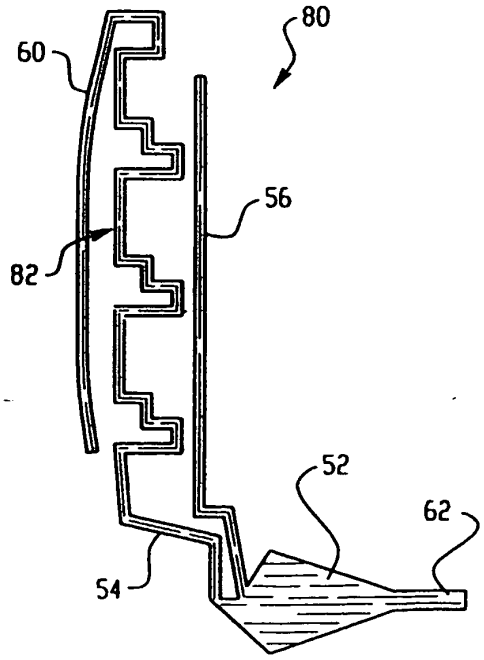


Fig. 5

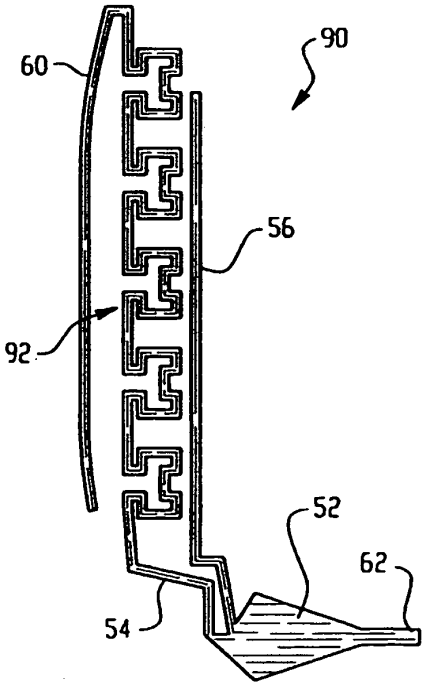


Fig. 6

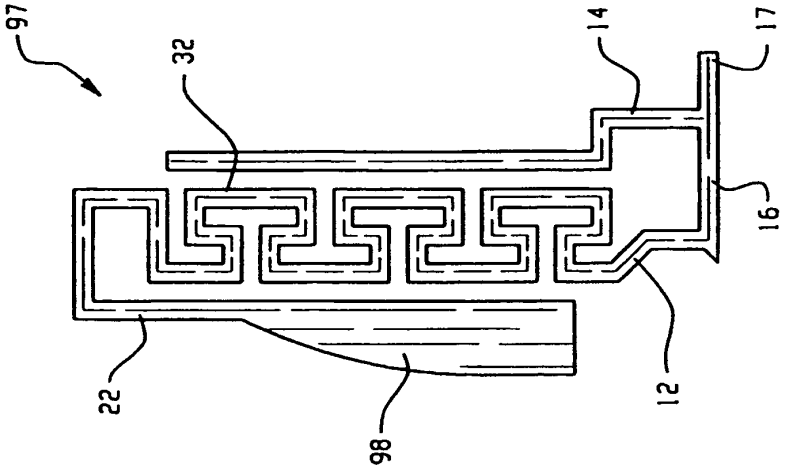


Fig. 9

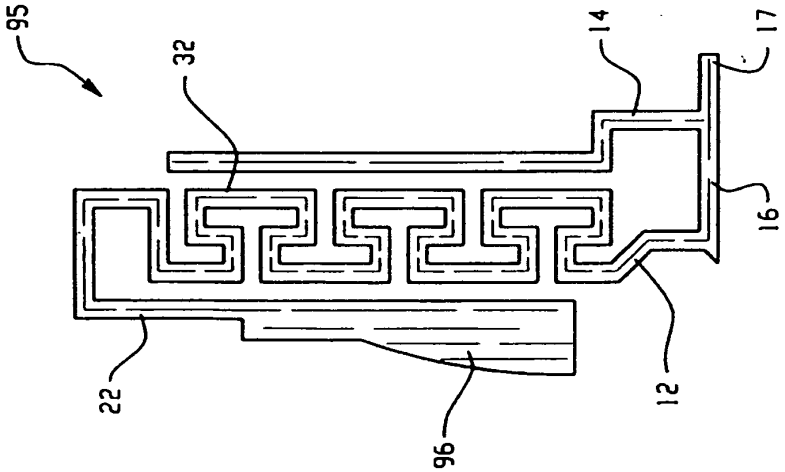


Fig. 8

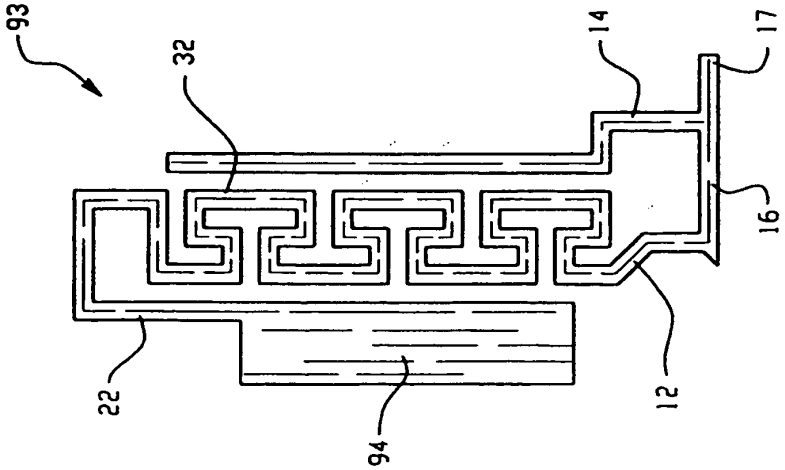


Fig. 7

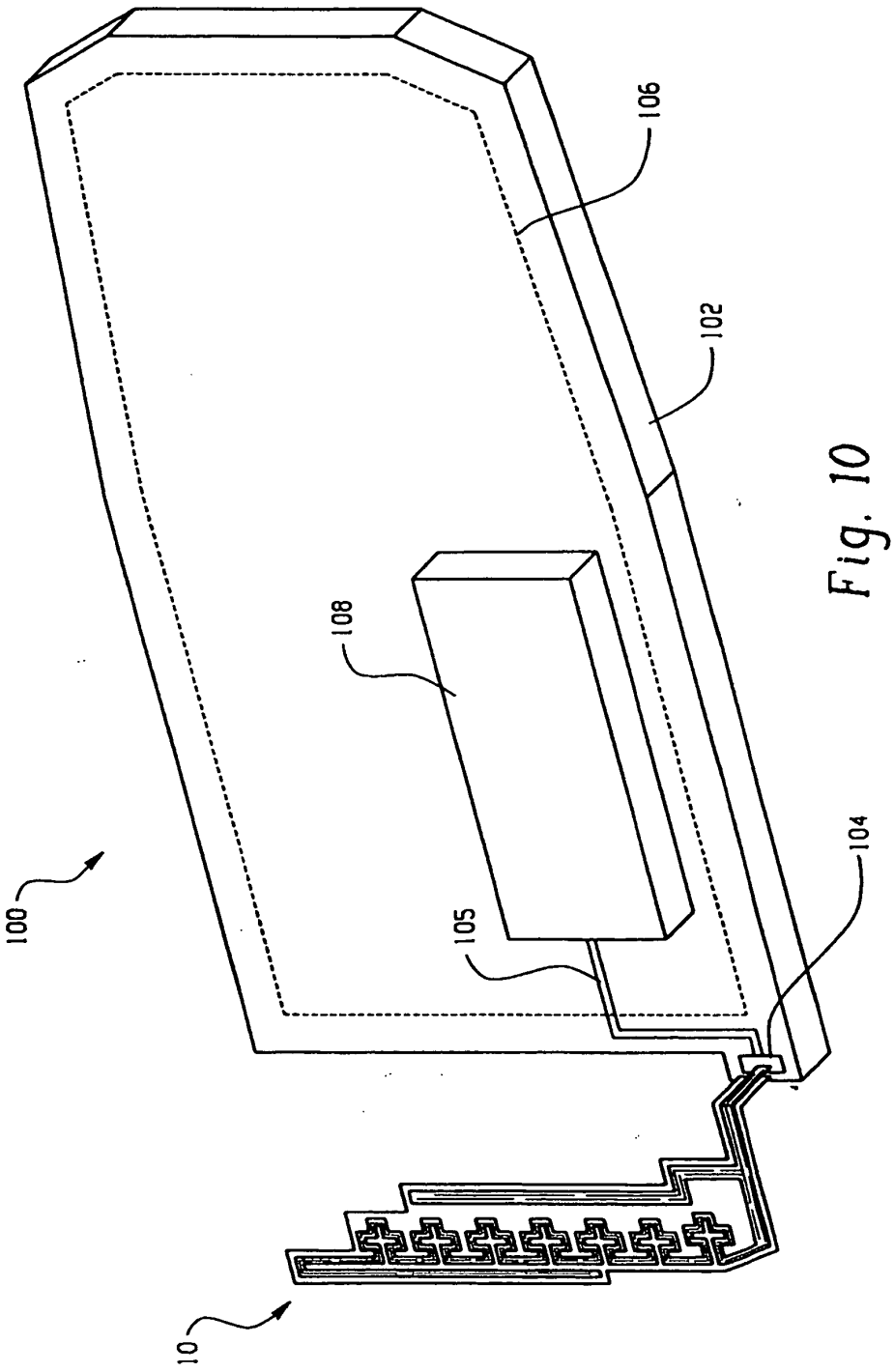


Fig. 10

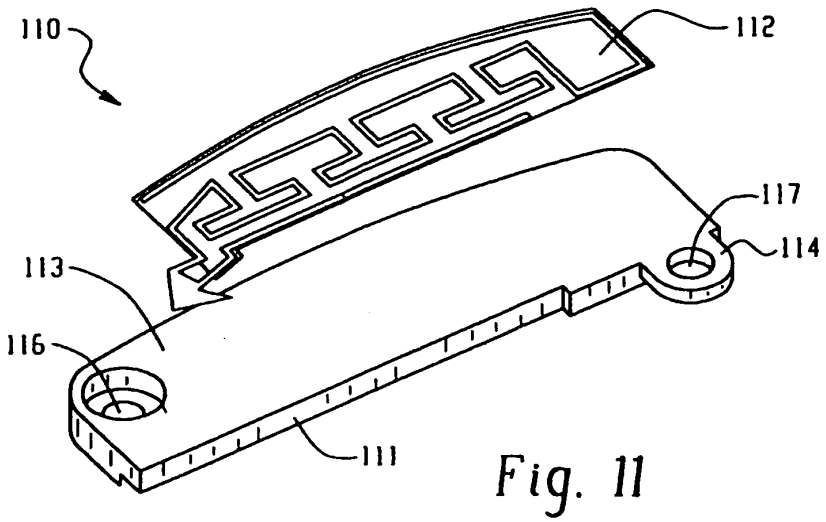

110
112
117
114
113
116
111

Fig. 11

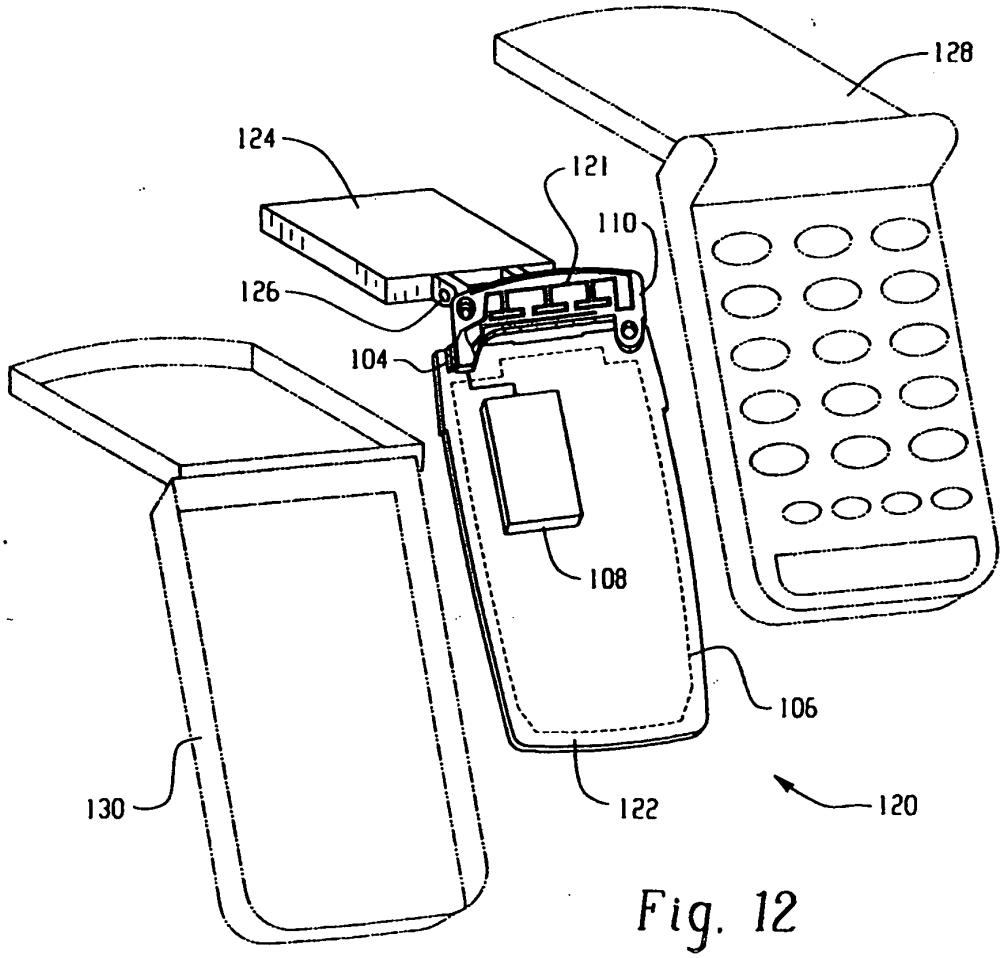

128
124
121
110
126
104
108
106
130
122
120

Fig. 12

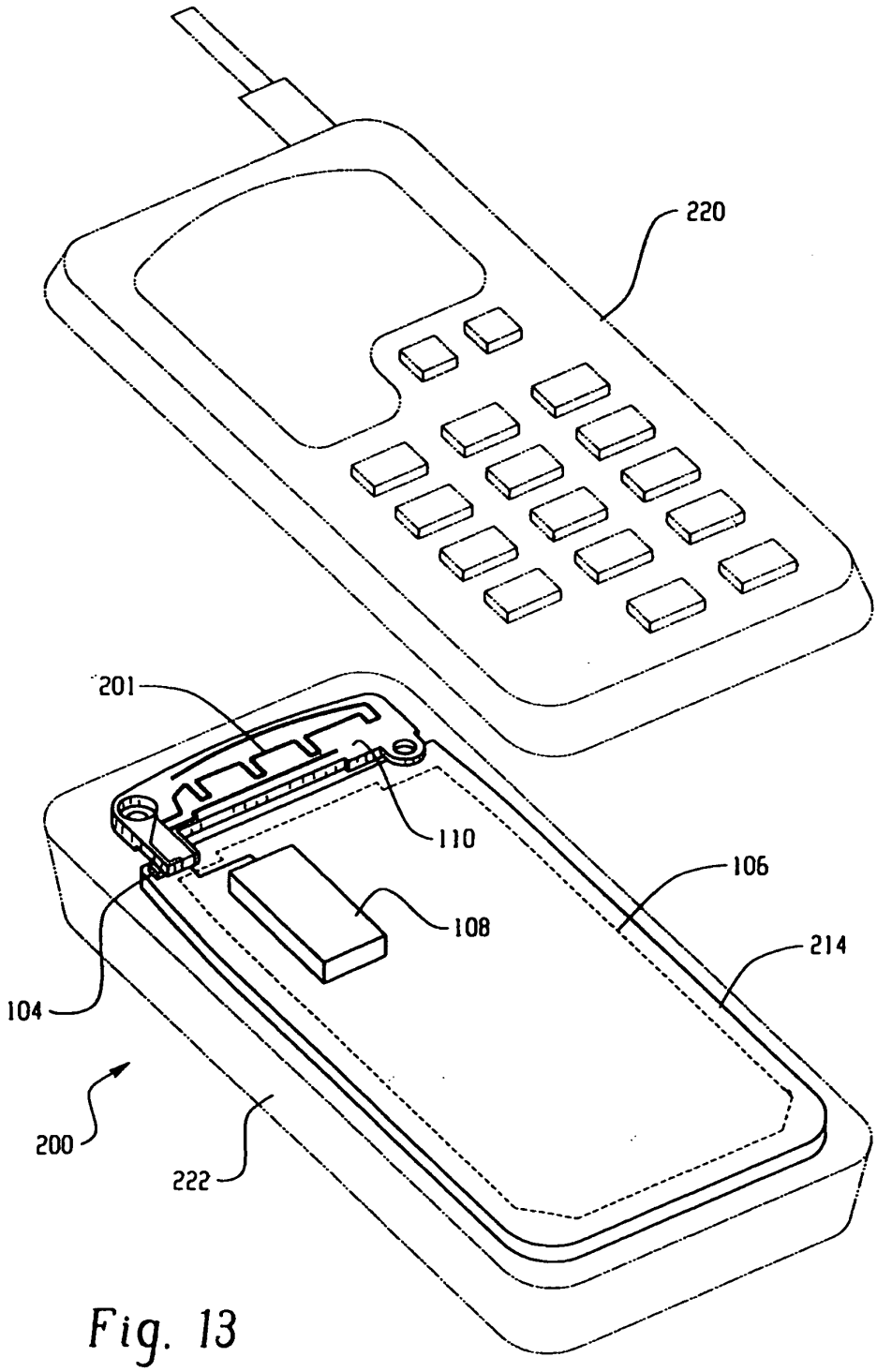


Fig. 13

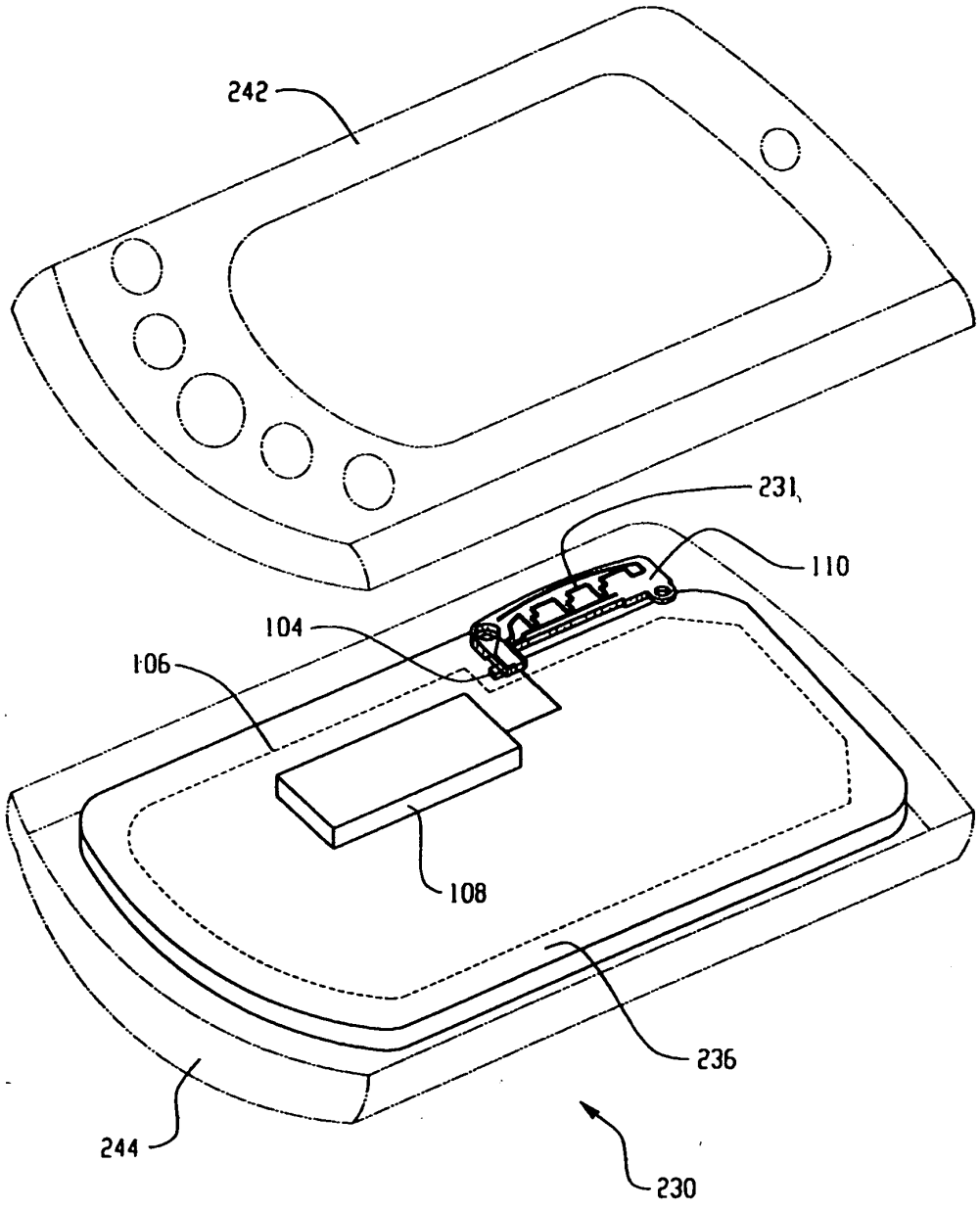


Fig. 14

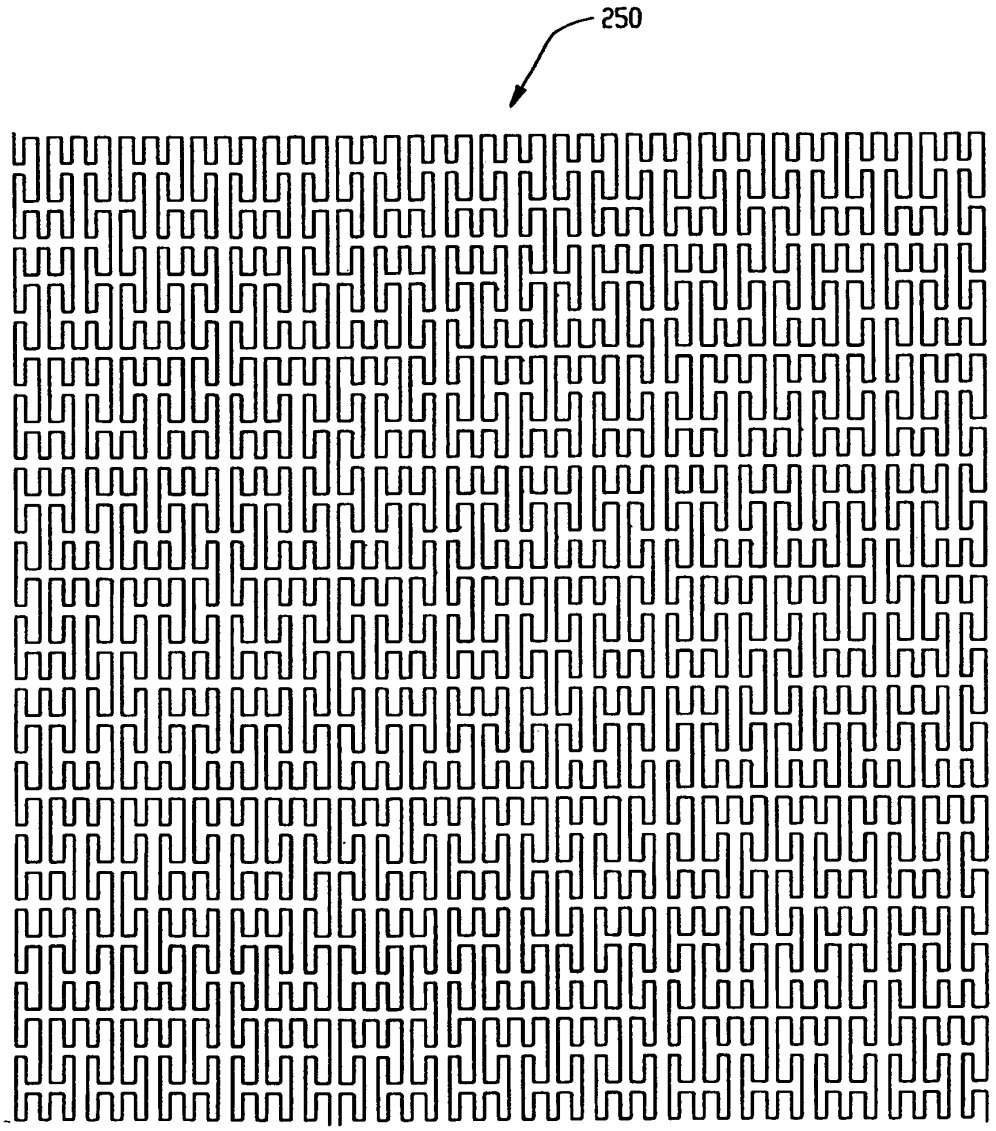


Fig. 15

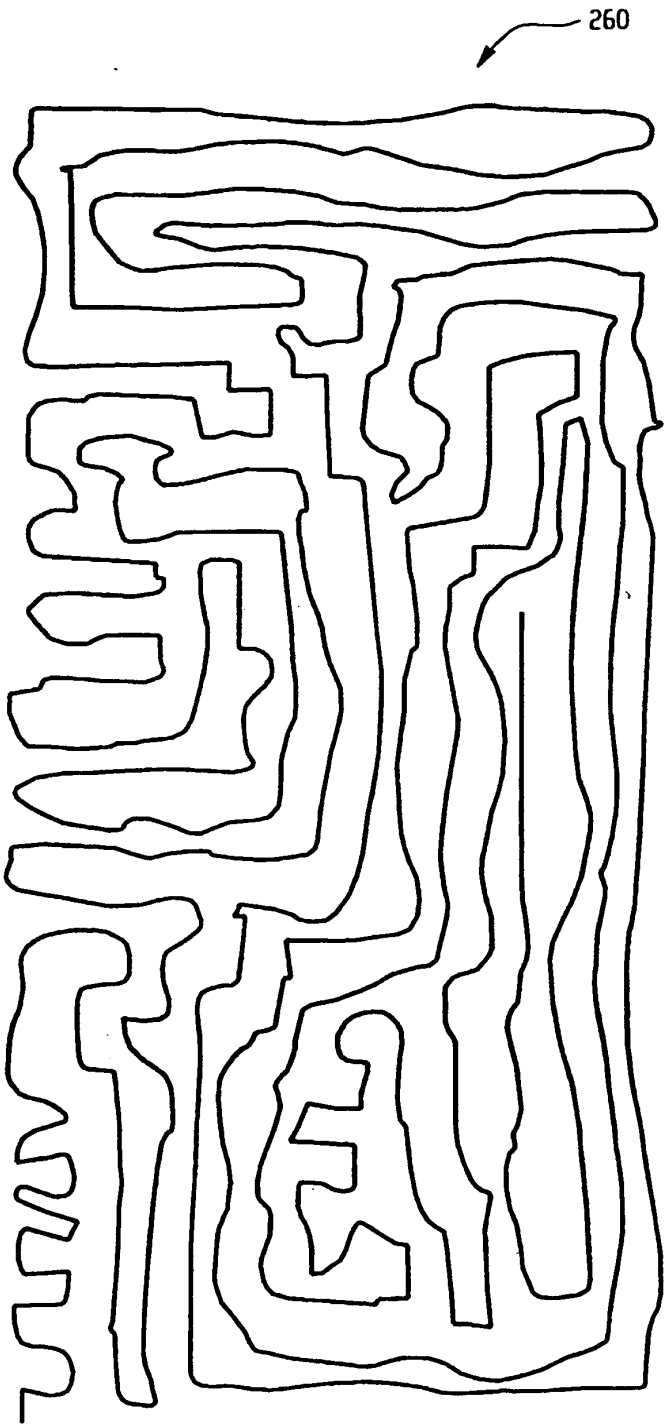


Fig. 16

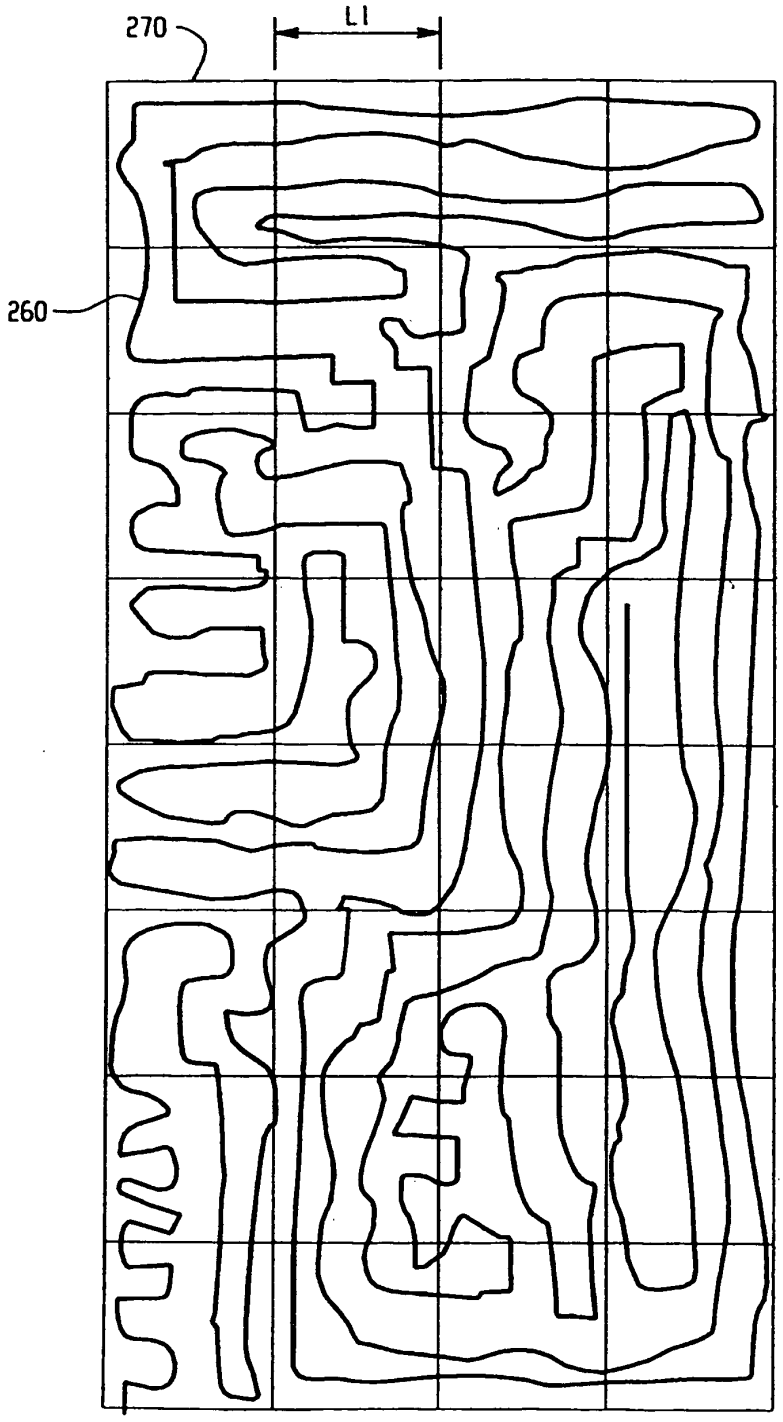


Fig. 17

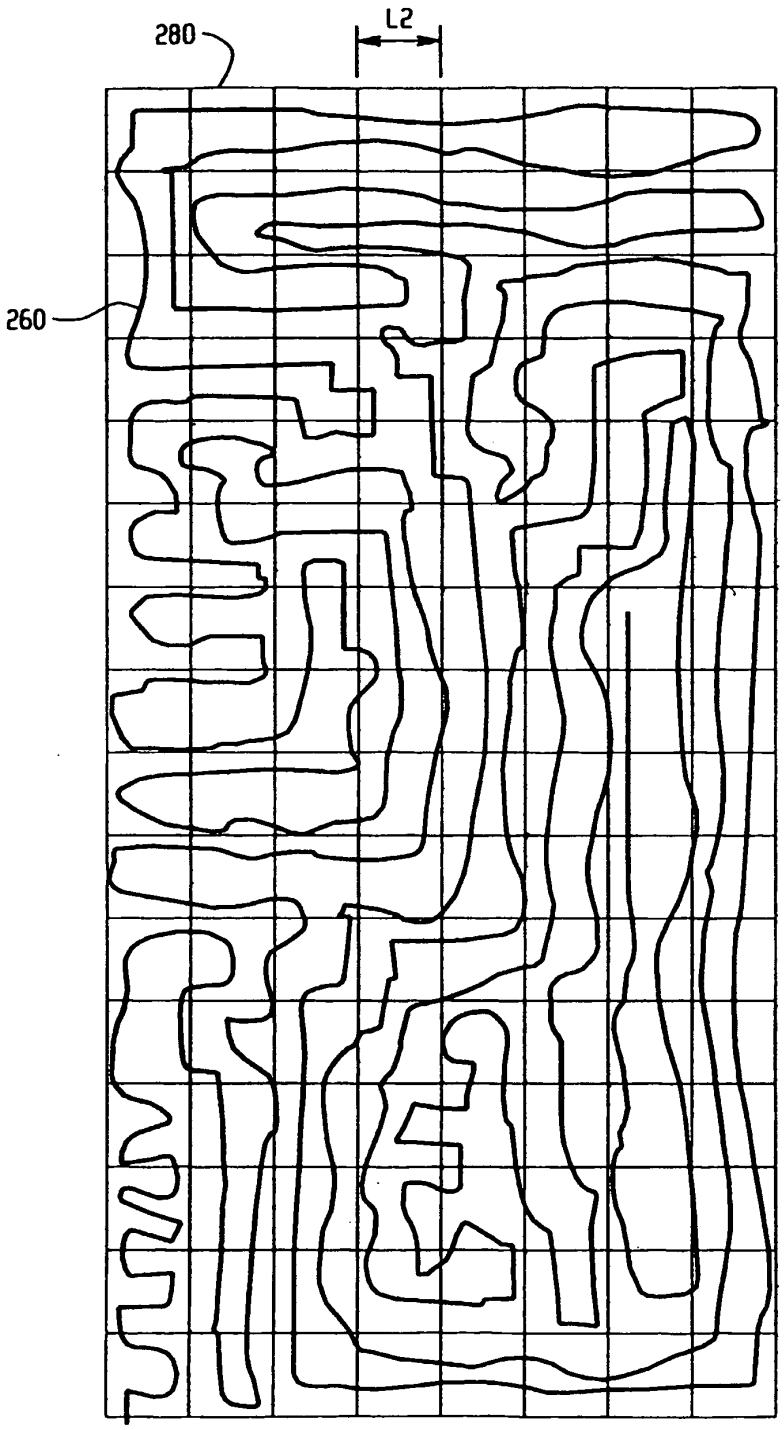


Fig. 18

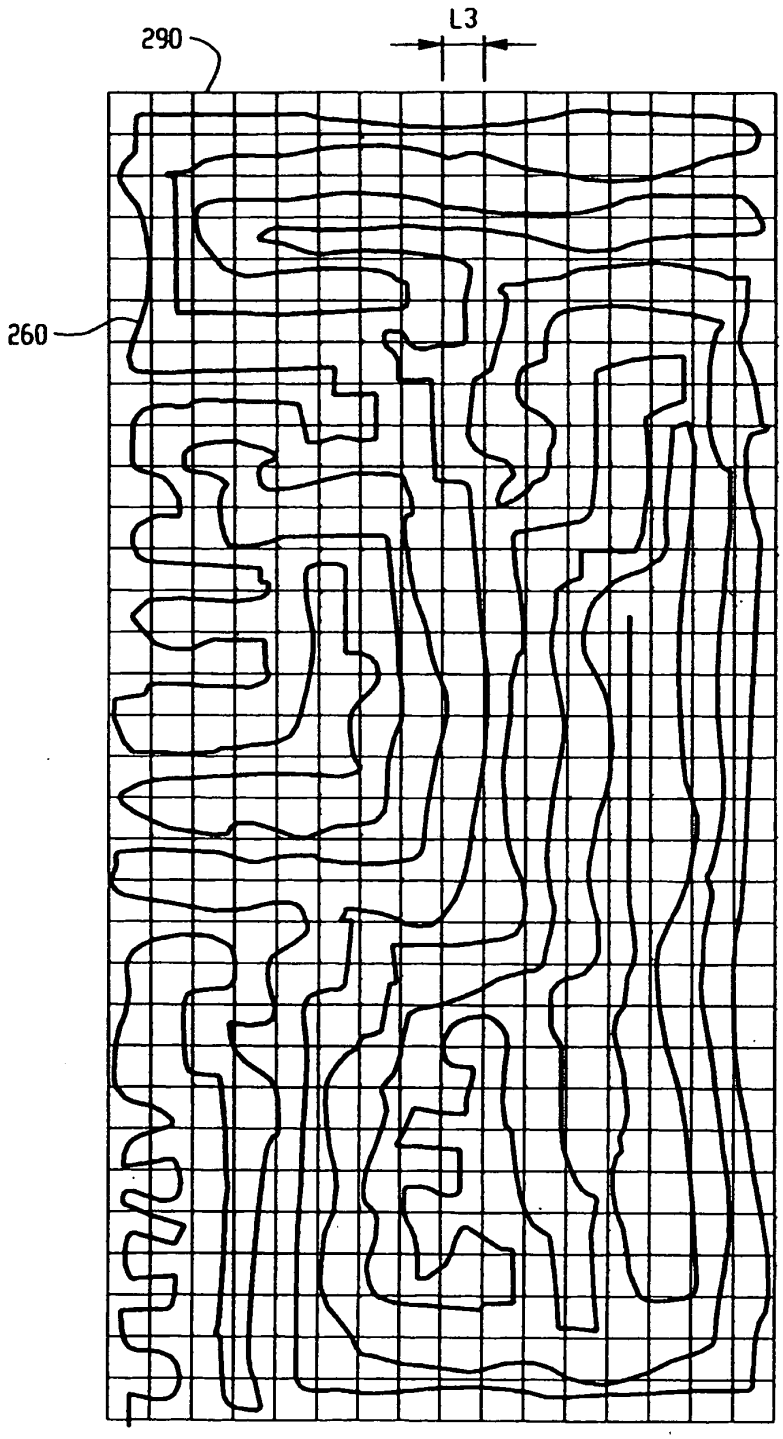


Fig. 19

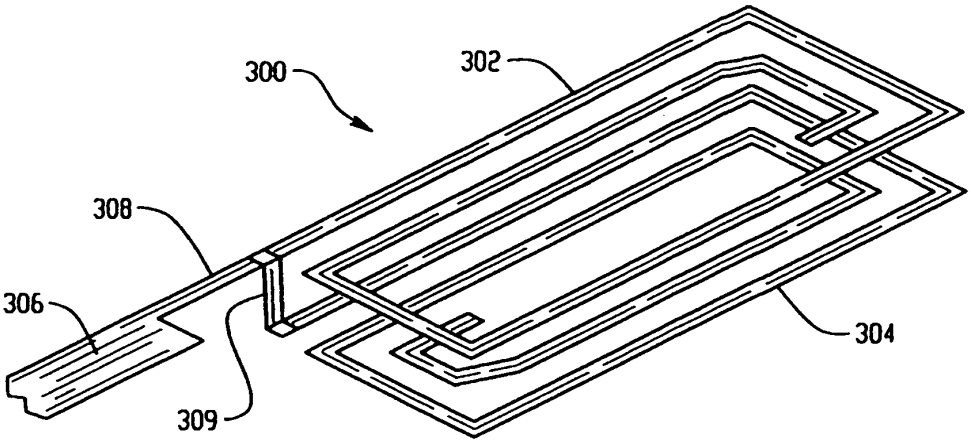


Fig. 20a

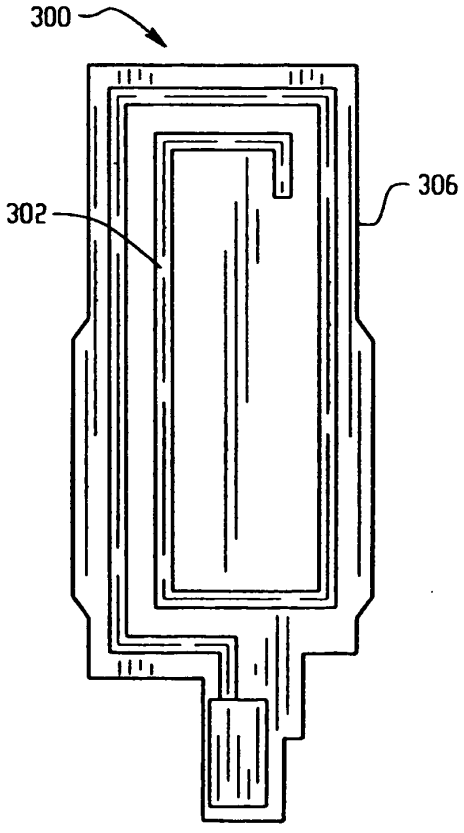


Fig. 20b

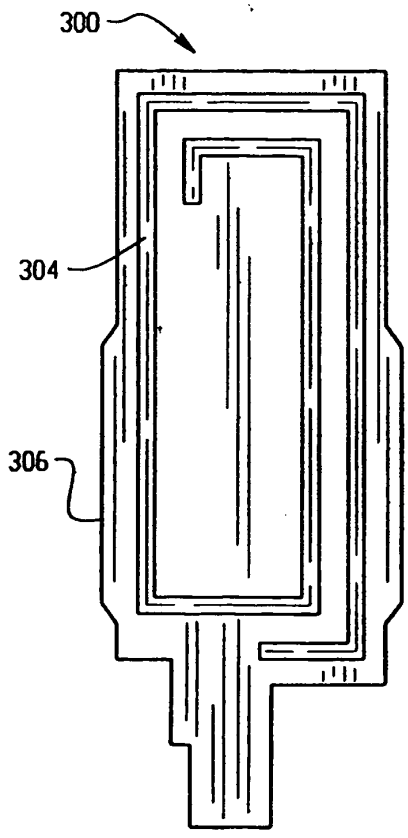


Fig. 20c

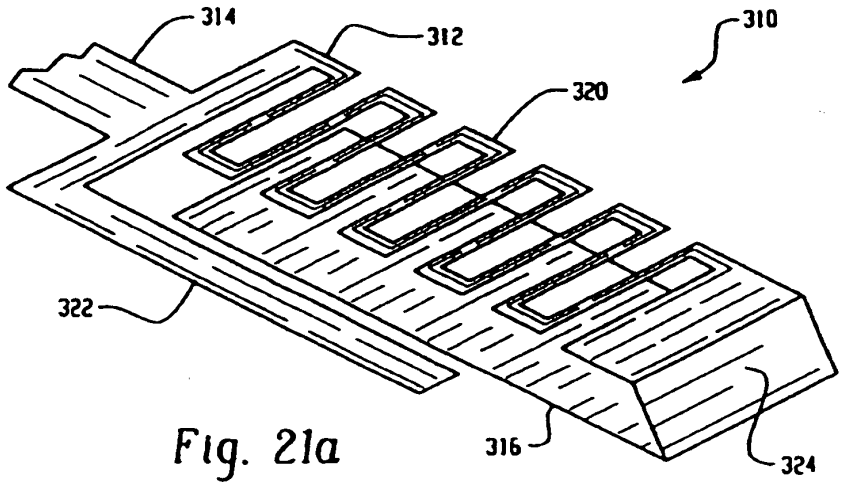


Fig. 21a

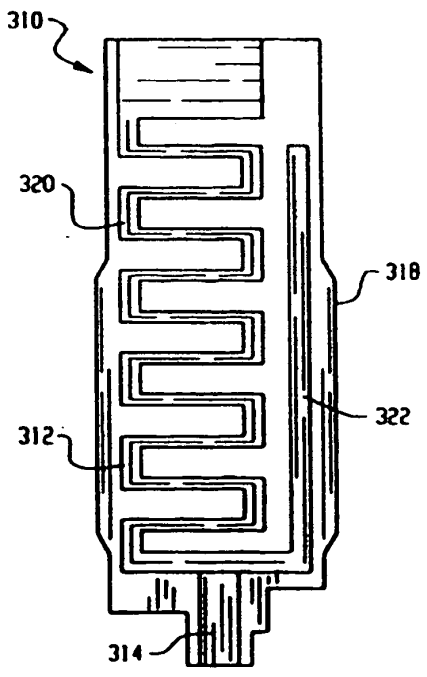


Fig. 21b

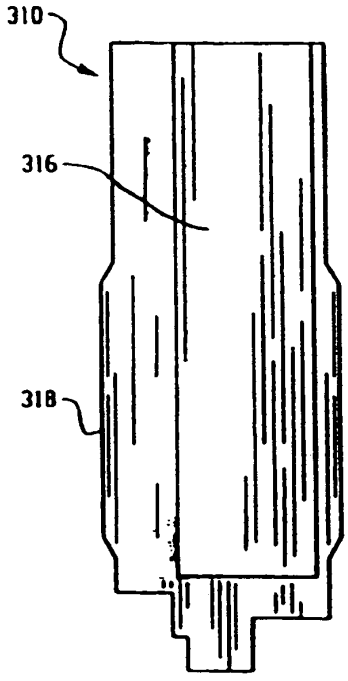


Fig. 21c

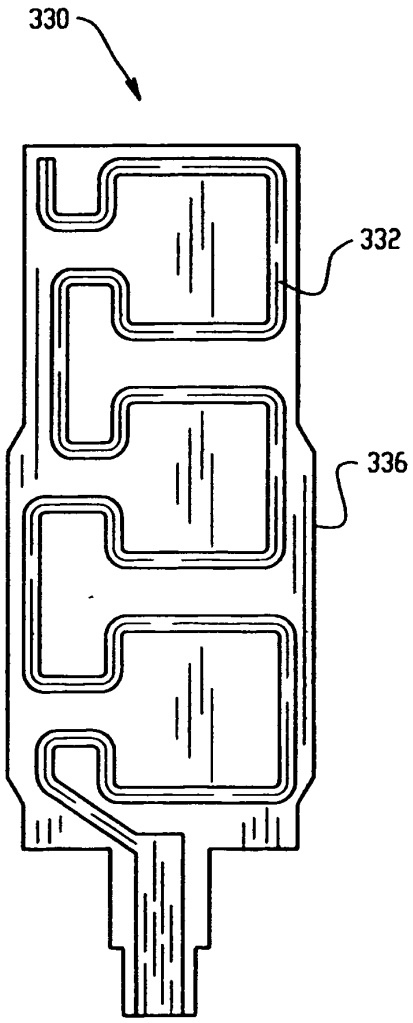


Fig. 22a

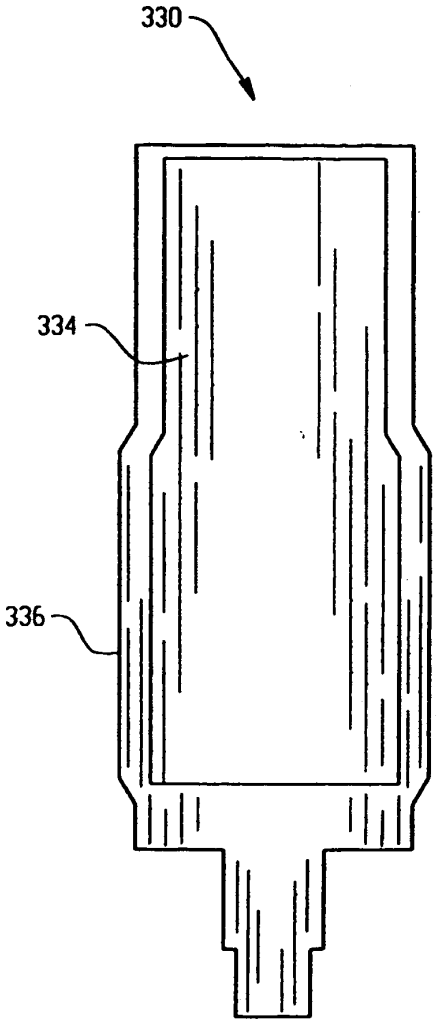


Fig. 22b

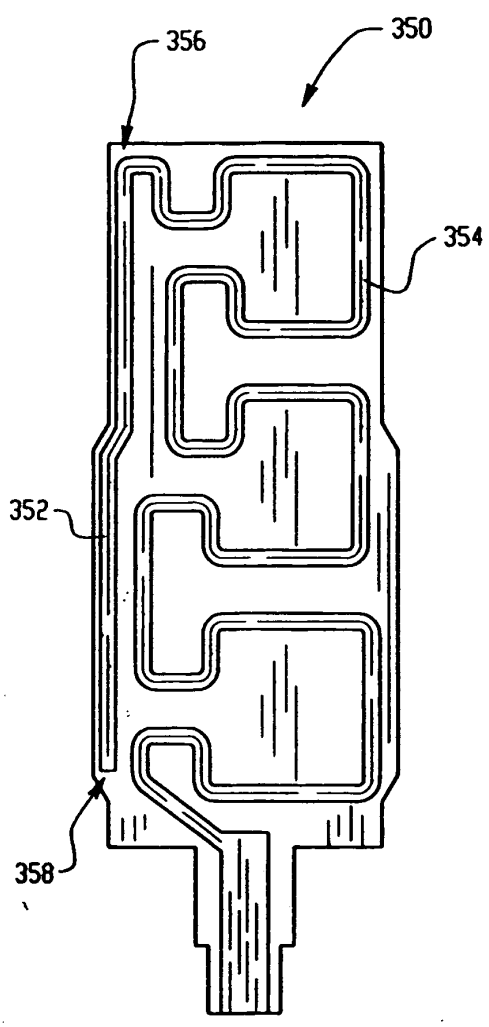


Fig. 23a

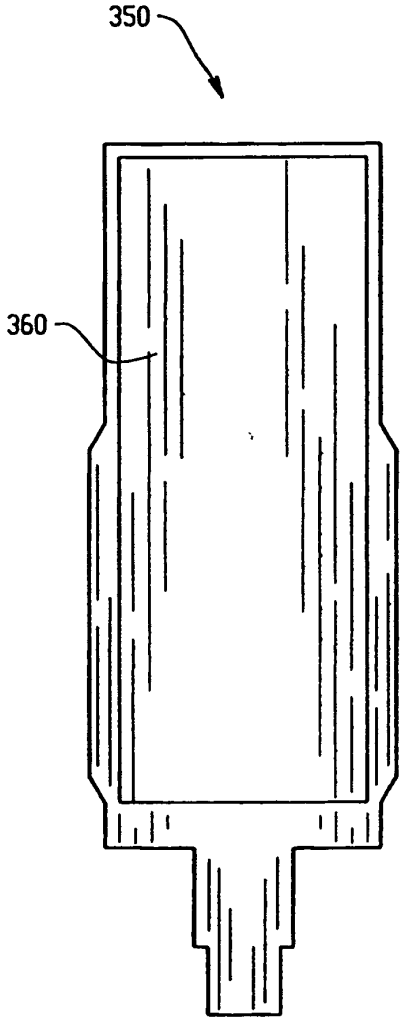


Fig. 23b

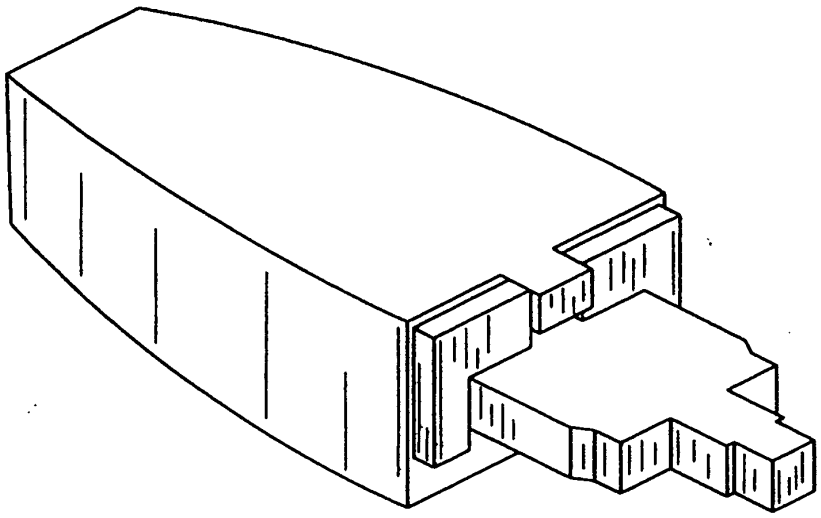


Fig. 24

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Dated: August 13, 2008 Signature: Toni Watkins
(Toni Watkins)

Docket No.: 47005-P018WUSC1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jaume Anguera Pros et al.

Application No: Not Yet Assigned — Confirmation No. N/A

Filed: Concurrently Filed Herewith — Art Unit: N/A

For: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES — Examiner: Not Yet Assigned

FIRST PRELIMINARY AMENDMENT

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

INTRODUCTORY COMMENTS

Prior to examination on the merits, please amend the above-identified U.S. patent application as follows:

Amendments to the Specification begin on page 2 of this paper.

Remarks/Arguments begin on page 3 of this paper.

AMENDMENTS TO THE SPECIFICATION

Please add the following on page 1 of the specification after the title of the invention:

This patent application is a continuation of U.S. Patent Application No. 10/584,442, filed on July 18, 2006 as a national stage filing of PCT/EP2005/000880. U.S. Patent Application No. 10/584,442 claims priority from, and incorporates by reference the entire disclosure of U.S. Provisional Patent Application No. 60/540,450, filed on January 30, 2004. U.S. Patent Application No. 10/584,442, International Patent Application PCT/EP2005/000880, and U.S. Provisional Patent Application No. 60/540,450 are incorporated herein by reference.

REMARKS

In view of the foregoing amendments and remarks, Applicant believes the pending application to be in condition for allowance. A Notice to that effect is respectfully requested.

Dated: August 13, 2008

Respectfully submitted,

By_____
Shoaib A. Mithani
Registration No.: 61,654
WINSTEAD PC
P.O. Box 50784
Dallas, Texas 75201
(214) 745-5400
Attorneys For Applicant

PATENT APPLICATION SERIAL NO._____

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

08/15/2008 TLUU11 00000007 232426 12228487

01 FC:1011 310.00 DA
02 FC:1111 510.00 DA
03 FC:1311 210.00 DA

PTO-1556
(5/87)

*U.S. Government Printing Office: 2002- 489-267/69033

PTO/SB/06 (10-07)
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 12228487

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	$155		N/A	$310
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	$255		N/A	$510
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	$105		N/A	$210
TOTAL CLAIMS (37 CFR 1.16(i))	15 minus 20 =	*	X $25 =		OR	X $50 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	1 minus 3 =	*	X $105 =			X $210 =	
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $260 ($130 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).		$130			$260	
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))			$185			$370	
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	1030

APPLICATION AS AMENDED – PART II

AMENDMENT A

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $25 =		OR	X $50 =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $105 =		OR	X $210 =	
Application Size Fee (37 CFR 1.16(s))									
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					$185		OR	$370	
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

AMENDMENT B

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)	OR	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $25 =		OR	X $50 =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $105 =		OR	X $210 =	
Application Size Fee (37 CFR 1.16(s))									
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					$185		OR	$370	
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

16367 U.S. PTO
081308

U.S. PTO
12/228487
08/13/2008

PTO/SB/05 (07-07)
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U.S. Patent and Trademark Office. U.S. DEPARTMENT OF COMMERCE
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UTILITY PATENT APPLICATION TRANSMITTAL

(ONLY FOR NEW NONPROVISIONAL APPLICATIONS UNDER 37 CFR 1.53(B))

Attorney Docket No.	47005-P018WUSC1
First Inventor	Jaume Anguera Pros
Title	MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES
Express Mail Label No.	EM 020149567 US

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. [X] **Fee Transmittal Form** (e.g., PTO/SB/17) *(Submit an original and a duplicate for fee processing)*
2. [ ] **Applicant claims small entity status.** See 37 CFR 1.27.
3. [X] **Specification** [*Total Pages* 21] Both the claims and abstract must start on a new page *(For information on the preferred arrangement, see MPEP 608.01(a))*
4. [X] **Drawing(s)** *(35 U.S.C. 113)* [*Total Sheets* 17]
5. **Oath or Declaration** [*Total Sheets*]
   - a. [ ] Newly executed (original or copy)
   - b. [ ] A copy from a prior application (37 CFR 1.63(d)) *(for continuation/divisional with Box 18 completed)*
     - i. [ ] DELETION OF INVENTOR(S) Signed statement attached deleting inventor(s) name in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. [ ] **Application Data Sheet.** See 37 CFR 1.76
7. [ ] **CD-ROM or CD-R** in duplicate, large table or Computer Program *(Appendix)*
   - [ ] Landscape Table on CD
8. **Nucleotide and/or Amino Acid Sequence Submission** *(if applicable, items a. – c. are required)*
   - a. [ ] Computer Readable Form (CRF)
   - b. Specification Sequence Listing on:
     - i. [ ] CD-ROM or CD-R (2 copies); or ii. [ ] Paper
   - c. [ ] Statements verifying identity of above copies

ADDRESS TO: **Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450**

ACCOMPANYING APPLICATION PARTS

9. [ ] **Assignment Papers** (cover sheet & document(s))
   Name of Assignee
10. [ ] **37 CFR 3.73(b) Statement** *(when there is an assignee)* [ ] **Power of Attorney**
11. [ ] **English Translation Document** *(if applicable)*
12. [ ] **Information Disclosure Statement** (PTO/SB/08 or PTO-1449)
    - [ ] Copies of citations attached
13. [ ] **Preliminary Amendment**
14. [X] **Return Receipt Postcard** (MPEP 503) *(Should be specifically itemized)*
15. [ ] **Certified Copy of Priority Document(s)** *(if foreign priority is claimed)*
16. [ ] **Nonpublication Request** under 35 U.S.C.122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent.
17. [X] Other: First Preliminary Amendment

18. If a CONTINUING APPLICATION, *check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:*

[X] Continuation [ ] Divisional [ ] Continuation-in-part (CIP) of prior application No.: 10/584,442

Prior application information: Examiner Not Yet Assigned *Art Unit:* N/A

19. CORRESPONDENCE ADDRESS

[X] The address associated with Customer Number: 61060 *OR* [ ] Correspondence address below

Name					
Address					
City		State		Zip Code	
Country		Telephone		Email Address	

Signature		Date	August 13, 2008
Name (Print/Type)	Shoaib A. Mithani	Registration No. (Attorney/Agent)	61,654

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Dated: August 13, 2008 Signature: Toni Watkins (Toni Watkins)

5256335v.1 47005/P018WUSC1

PTO/SB/05 (07-07)
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U.S. Patent and Trademark Office. U.S. DEPARTMENT OF COMMERCE
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UTILITY PATENT APPLICATION TRANSMITTAL

(ONLY FOR NEW NONPROVISIONAL APPLICATIONS UNDER 37 CFR 1.53(B))

Attorney Docket No.	47005-P018WUSC1
First Inventor	Jaume Anguera Pros
Title	MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES
Express Mail Label No.	EM 020149567 US

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

ADDRESS TO: **Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450**

1. [X] **Fee Transmittal Form** (e.g., PTO/SB/17) *(Submit an original and a duplicate for fee processing)*
2. [ ] **Applicant claims small entity status.** See 37 CFR 1.27.
3. [X] **Specification** [*Total Pages* 21] Both the claims and abstract must start on a new page *(For information on the preferred arrangement, see MPEP 608.01(a))*
4. [X] **Drawing(s)** *(35 U.S.C. 113)* [*Total Sheets* 17]
5. **Oath or Declaration** [*Total Sheets*]
   a. [ ] Newly executed (original or copy)
   b. [ ] A copy from a prior application (37 CFR 1.63(d)) *(for continuation/divisional with Box 18 completed)*
      i. [ ] DELETION OF INVENTOR(S) Signed statement attached deleting inventor(s) name in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. [ ] **Application Data Sheet.** See 37 CFR 1.76
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   [ ] Landscape Table on CD
8. **Nucleotide and/or Amino Acid Sequence Submission** *(if applicable, items a. – c. are required)*
   a. [ ] Computer Readable Form (CRF)
   b. Specification Sequence Listing on:
      i. [ ] CD-ROM or CD-R (2 copies); or ii. [ ] Paper
   c. [ ] Statements verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

9. [ ] **Assignment Papers** (cover sheet & document(s))
   Name of Assignee
10. [ ] **37 CFR 3.73(b) Statement** *(when there is an assignee)* [ ] **Power of Attorney**
11. [ ] **English Translation Document** *(if applicable)*
12. [ ] **Information Disclosure Statement** (PTO/SB/08 or PTO-1449)
    [ ] Copies of citations attached
13. [ ] **Preliminary Amendment**
14. [X] **Return Receipt Postcard** (MPEP 503) *(Should be specifically itemized)*
15. [ ] **Certified Copy of Priority Document(s)** *(if foreign priority is claimed)*
16. [ ] **Nonpublication Request** under 35 U.S.C.122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent.
17. [X] Other: First Preliminary Amendment

18. If a CONTINUING APPLICATION, *check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:*

[X] Continuation [ ] Divisional [ ] Continuation-in-part (CIP) of prior application No.: 10/584,442

Prior application information: Examiner Not Yet Assigned *Art Unit:* N/A

19. CORRESPONDENCE ADDRESS

[X] The address associated with Customer Number: 61060 *OR* [ ] Correspondence address below

Name					
Address					
City		State		Zip Code	
Country		Telephone		Email Address	

Signature		Date	August 13, 2008
Name (Print/Type)	Shoaib A. Mithani	Registration No. (Attorney/Agent)	61,654

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Dated: August 13, 2008 Signature: Toni Watkins (Toni Watkins)

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Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL
For FY 2008

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT ($) 1,030.00

Complete if Known	
Application Number	Not Yet Assigned
Filing Date	Concurrently Herewith
First Named Inventor	Jaume Anguera Pros
Examiner Name	Not Yet Assigned
Art Unit	N/A
Attorney Docket No.	47005-P018WUSC1

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☒ Deposit Account Deposit Account Number: 23-2426 Deposit Account Name: Winstead PC

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, **except for the filing fee**

☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments

FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

	FILING FEES		SEARCH FEES		EXAMINATION FEES		
Application Type	**Fee ($)**	**Small Entity Fee ($)**	**Fee ($)**	**Small Entity Fee ($)**	**Fee ($)**	**Small Entity Fee ($)**	**Fees Paid ($)**
Utility	310	155	510	255	210	105	1,030.00
Design	210	105	100	50	130	65	
Plant	210	105	310	155	160	80	
Reissue	310	155	510	255	620	310	
Provisional	210	105	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	**Fee ($)**	**Small Entity Fee ($)**
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	210	105
Multiple dependent claims	370	185

Total Claims	**Extra Claims**	**Fee ($)**	**Fee Paid ($)**
15 - 20 =		x	=

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims	**Extra Claims**	**Fee ($)**	**Fee Paid ($)**
2 - 3 =		x	=

HP = highest number of independent claims paid for, if greater than 3.

Multiple Dependent Claims

Fee ($)	**Fee Paid ($)**

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is $260 ($130 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	**Extra Sheets**	**Number of each additional 50 or fraction thereof**	**Fee ($)**	**Fee Paid ($)**
38 - 100 =		/50 = (round **up** to a whole number) x		=

4. OTHER FEE(S)

	Fees Paid ($)
Non-English Specification, $130 fee (no small entity discount)	
Other (e.g., late filing surcharge):	

SUBMITTED BY

Signature		Registration No. (Attorney/Agent)	61,654	Telephone	(214) 745-5403
Name (Print/Type)	Shoaib A. Mithani			Date	August 13, 2008

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EM 020149567 US, on the date shown below in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: August 13, 2008 Signature: Toni Watkins (Toni Watkins)

5256337v.1 47005/P018WUSC1

16367 U.S. PTO
081308

PTO/SB/17 (10-07)
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Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL
For FY 2008

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT ($) 1,030.00

Complete if Known	
Application Number	Not Yet Assigned
Filing Date	Concurrently Herewith
First Named Inventor	Jaume Anguera Pros
Examiner Name	Not Yet Assigned
Art Unit	N/A
Attorney Docket No.	47005-P018WUSC1

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☒ Deposit Account Deposit Account Number: 23-2426 Deposit Account Name: Winstead PC

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, **except for the filing fee**

☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments

FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

	FILING FEES		SEARCH FEES		EXAMINATION FEES		
Application Type	**Fee ($)**	**Small Entity Fee ($)**	**Fee ($)**	**Small Entity Fee ($)**	**Fee ($)**	**Small Entity Fee ($)**	**Fees Paid ($)**
Utility	310	155	510	255	210	105	1,030.00
Design	210	105	100	50	130	65	
Plant	210	105	310	155	160	80	
Reissue	310	155	510	255	620	310	
Provisional	210	105	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	**Fee ($)**	**Small Entity Fee ($)**
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	210	105
Multiple dependent claims	370	185

Total Claims	**Extra Claims**	**Fee ($)**	**Fee Paid ($)**
15 - 20 =		x	=

HP = highest number of total claims paid for, if greater than 20.

Multiple Dependent Claims

Fee ($)	**Fee Paid ($)**

Indep. Claims	**Extra Claims**	**Fee ($)**	**Fee Paid ($)**
2 - 3 =		x	=

HP = highest number of independent claims paid for, if greater than 3.

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is $260 ($130 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	**Extra Sheets**	**Number of each additional 50 or fraction thereof**	**Fee ($)**	**Fee Paid ($)**
38 - 100 =		/50 = (round up to a whole number) x		=

4. OTHER FEE(S)

	Fees Paid ($)
Non-English Specification, $130 fee (no small entity discount)	
Other (e.g., late filing surcharge):	

SUBMITTED BY

Signature		Registration No. (Attorney/Agent)	61,654	Telephone	(214) 745-5403
Name (Print/Type)	Shoaib A. Mithani			Date	August 13, 2008

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EM 020149567 US, on the date shown below in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: August 13, 2008 Signature: Toni Watkins (Toni Watkins)

5256337v.1 47005/P018WUSC1

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
12/228,487	08/13/2008	2821	1030	47005-P018WUSC1	15	2

CONFIRMATION NO. 6222

61060
WINSTEAD PC
P.O. BOX 50784
DALLAS, TX 75201

FILING RECEIPT

OC000000031875690

Date Mailed: 09/04/2008

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Applicant(s)

Jaume Anguera Pros, Residence Not Provided;

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CON of 10/584,442 07/18/2006 PAT 7,423,592
which is a 371 of PCT/EP2005/000880 01/28/2005
and claims benefit of 60/540,450 01/30/2004

Foreign Applications

If Required, Foreign Filing License Granted: 09/02/2008

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 12/228,487**

Projected Publication Date: To Be Determined - pending completion of Missing Parts

Non-Publication Request: No

Early Publication Request: No

Title

Multi-band monopole antennas for mobile communications devices

Preliminary Class

343

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as

set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/228,487	08/13/2008	Jaume Anguera Pros	47005-P018WUSC1

CONFIRMATION NO. 6222

61060
WINSTEAD PC
P.O. BOX 50784
DALLAS, TX 75201

FORMALITIES LETTER

OC000000031875691

Date Mailed: 09/04/2008

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The oath or declaration is missing.
  A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.
  Note: If a petition under 37 CFR 1.47 is being filed, an oath or declaration in compliance with 37 CFR 1.63 signed by all available joint inventors, or if no inventor is available by a party with sufficient proprietary interest, is required.

The applicant needs to satisfy supplemental fees problems indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- To avoid abandonment, a surcharge (for late submission of filing fee, search fee, examination fee or oath or declaration) as set forth in 37 CFR 1.16(f) of $**130** for a non-small entity, must be submitted with the missing items identified in this notice.

SUMMARY OF FEES DUE:

Total additional fee(s) required for this application is $**130** for a non-small entity
- $**130** Surcharge.

Replies should be mailed to:

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web.
https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html

For more information about EFS-Web please call the USPTO Electronic Business Center at **1-866-217-9197** or visit our website at http://www.uspto.gov/ebc.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

/smunpanthavong/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

10/16/08

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EM 020149862 US, on the date shown below in an envelope addressed to: MS Missing Parts, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: October 15, 2008 Signature: (Brenda I. Brown)

USPTO MAIL ROOM OCT 15 2008 PATENT & TRADEMARK OFFICE

Docket No.: 47005-P018WUSC1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jaume Anguera Pros et al.

Application No.: 12/228,487

Confirmation No.: 6222

Filed: August 13, 2008

Art Unit: 2821

For: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES

Examiner: Not Yet Assigned

RESPONSE TO NOTICE TO FILE MISSING PARTS OF APPLICATION

MS Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In response to the Notice to File Missing Parts of Application – Filing Date Granted mailed September 4, 2008, Applicant respectfully submits a Combined Declaration and Power of Attorney and Part 2 Copy of Notice.

Please charge our Deposit Account No. 23-2426 in the amount of $130.00 covering the fee set forth in 37 CFR 1.16(f). The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper

10/16/2008 CNGUYEN2 00000082 232426 12228487
01 FC:1051 130.00 DA

5282512v.1 47005/P018WUSC1

hereafter filed in this application by this firm) to our Deposit Account No. 23-2426, under Order No. 47005-P018WUSC1. A duplicate copy of this paper is enclosed.

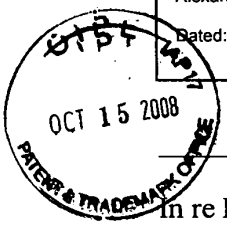
Dated: October 15, 2008

Respectfully submitted,

By_____
Shoaib A. Mithani
Registration No.: 61,654
WINSTEAD PC
P.O. Box 50784
Dallas, Texas 75201
(214) 745-5400
Attorneys For Applicant

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EM 020149862 US, on the date shown below in an envelope addressed to: MS Missing Parts, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: October 15, 2008 Signature: (Brenda I. Brown)



Docket No.: 47005-P018WUSC1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jaume Anguera Pros et al.

Application No.: 12/228,487

Confirmation No.: 6222

Filed: August 13, 2008

Art Unit: 2821

For: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES

Examiner: Not Yet Assigned

RESPONSE TO NOTICE TO FILE MISSING PARTS OF APPLICATION

MS Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In response to the Notice to File Missing Parts of Application – Filing Date Granted mailed September 4, 2008, Applicant respectfully submits a Combined Declaration and Power of Attorney and Part 2 Copy of Notice.

Please charge our Deposit Account No. 23-2426 in the amount of $130.00 covering the fee set forth in 37 CFR 1.16(f). The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper

hereafter filed in this application by this firm) to our Deposit Account No. 23-2426, under Order No. 47005-P018WUSC1. A duplicate copy of this paper is enclosed.

Dated: October 15, 2008

Respectfully submitted,

By _____
Shoaib A. Mithani
Registration No.: 61,654
WINSTEAD PC
P.O. Box 50784
Dallas, Texas 75201
(214) 745-5400
Attorneys For Applicant



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

DECLARATION FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am an original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled:

MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES

the specification of which was filed on August 13, 2008 as Application No. 12/228,487.

In the event that the filing date and/or Application No. are not entered above at the time I execute this document, and if such information is deemed necessary, I hereby authorize and request my attorneys/agent(s) at **Winstead PC**, P.O. Box 50784, Dallas, Texas 75201, to insert above the filing date and/or Application No. of said application.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by an amendment, if any, specifically referred to herein.

I acknowledge the duty to disclose all information known to me that is material to patentability in accordance with Title 37, Code of Federal Regulations, § 1.56.

FOREIGN PRIORITY CLAIM

I hereby claim foreign priority benefits under Title 35, United States Code § 119(a)-(d) of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

[x] no such foreign applications have been filed

[ ] such foreign application have been filed as follows:

EARLIEST FOREIGN APPLICATION(S), IF ANY FILED WITHIN 12 MONTHS (6 MONTHS FOR DESIGN) PRIOR TO THIS U.S. APPLICATION

Application Number	Country	Date of Filing	Priority Claimed Under 35 USC 119

ALL FOREIGN APPLICATION(S), IF ANY FILED MORE THAN 12 MONTHS (6 MONTHS FOR DESIGN) PRIOR TO THIS U.S. APPLICATION

Application Number	Country	Date of Filing

CLAIM FOR BENEFIT OF EARLIER U.S. PROVISIONAL APPLICATIONS

I hereby claim priority benefits under Title 35, United States Code §119(e), of any United States provisional patent application(s) listed below:

☐ no such U.S. provisional applications have been filed.

☒ such U.S. provisional application have been filed as follows:

Application Number	Date of Filing	Priority Claimed Under 35 USC 119

CLAIM FOR BENEFIT OF EARLIER U.S./PCT APPLICATION(S)

I hereby claim the benefit under Title 35, United States Code, §120 of the United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose all information that is material to patentability in accordance with Title 37, Code of Federal Regulations, §1.56 which became available to me between the filing date of the prior application and the national or PCT international filing date of this application:

☐ no such U.S./PCT applications have been filed.

☒ such U.S./PCT application have been filed as follows:

Application Number	Relationship	Parent Application	Date of Filing
This Application	Continuation	10/584,442	July 18, 2006
10/584,442	371	PCT/EP2005/000880	January 28, 2005
PCT/EP2005/000880	119(e)	60/540,450	January 30, 2004

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

I hereby appoint:

All practitioners at Customer Number 61060

all of **Winstead PC**, P.O. Box 50784, Dallas, Texas 75201, jointly, and each of them severally, my attorneys at law/patent agent(s), with full power of substitution, delegation and revocation, to prosecute this application, to make alterations and amendments therein, to receive the patent, and to transact all business in the U. S. Patent and Trademark Office connected therewith.

The undersigned hereby authorizes the U.S. attorney or agent named herein to accept and follow instructions from Fractus, S.A. as to any action to be taken in the United States Patent and Trademark Office regarding this application without direct communication between the U.S. attorney or agent and the undersigned. In the event of a change in the persons from whom instructions may be taken, the U.S. attorney or agent named herein will be so notified by the undersigned.

Please mail all correspondence to Stanley R. Moore, whose address is:

Winstead PC
P.O. Box 50784
Dallas, Texas 75201

Please direct telephone calls to: Stanley R. Moore at (214) 745-5110.

Please direct facsimiles to: (214) 745-5390

Full name of sole or first inventor Jaume Anguera Pros	
Sole or first inventor's signature	Date 15 Sep 2008
Residence Vinaros, Spain	
Citizenship Spain	
Mailing Address Pg. Blasco Ibañez 15 12500 Vinaros SPAIN	

Full name of second inventor, if any Carles Puente Baliarda	
Second inventor's signature	Date 15 Sep 2008
Residence Barcelona, Spain	
Citizenship Spain	
Mailing Address c/Londres, 57 4° 2a E-08036 Barcelona SPAIN	

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CENTRAL FAX CENTER
OCT 29 2008

FAX TRANSMISSION

DATE: October 29, 2008

PTO IDENTIFIER: **Application Number** 12/228,487
Patent Number
Inventor: Jaume Anguera Pros et al.

MESSAGE TO: US Patent and Trademark Office
FAX NUMBER: (571) 273-8300

FROM: WINSTEAD PC
Shoaib A. Mithani
PHONE: (214) 745-5403
Attorney Dkt. #: 47005-P018WUSC1

PAGES (Including Cover Sheet): 7

CONTENTS:
Request For Corrected Notice of Recordation of Assignment (2 pages)
Certificate of Transmission (1 page)
Recordation Form Cover Sheet & Notice of Recordation (3 pages)

If your receipt of this transmission is in error, please notify this firm immediately by collect call to sender at (214) 745-5403 and send the original transmission to us by return mail at the address below.

This transmission is intended for the sole use of the individual and entity to whom it is addressed, and may contain information that is privileged, confidential and exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended addressee or its designated agent is strictly prohibited.

WINSTEAD PC
P.O. Box 50784, Dallas, Texas 75201
Telephone: (214) 745-5400 **Facsimile:** (214) 745-5390

PAGE 1/7 * RCVD AT 10/29/2008 4:08:20 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-5/20 * DNIS:2738300 * CSID:214 745 5711 * DURATION (mm-ss):02-04

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OCT 29 2008

PTO/SB/97 (09-04)
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U. S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Application No. (if known): 12/228,487 Attorney Docket No.: 47005-P018WUSC1

Certificate of Transmission under 37 CFR 1.8

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office.

on October 29, 2008 .
Date

Signature

Brenda I. Brown
Typed or printed name of person signing Certificate

Registration Number, if applicable

(214) 745-5400
Telephone Number

Note: Each paper must have its own certificate of transmission, or this certificate must identify each submitted paper.

Request For Corrected Notice of Recordation of Assignment (2 pages)
Certificate of Transmission (1page)
Recordation Form Cover Sheet & Notice of Recordation (3 pages)

PAGE 2/7 * RCVD AT 10/29/2008 4:08:20 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-5/20 * DNIS:2738300 * CSID:214 745 5711 * DURATION (mm-ss):02-04

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OCT 29 2008

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Dated: October 29, 2008 Signature: (Brenda I. Brown)

Docket No.: 47005-P018WUSC1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jaume Anguera Pros et al.

Application No.: 12/228,487 Confirmation No.: 6222

Filed: August 13, 2008 Art Unit: 2821

For: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES Examiner: Not Yet Assigned

REQUEST FOR CORRECTED NOTICE OF RECORDATION OF ASSIGNMENT

MS Assignment Recordation Services
Director of the US Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Applicants respectfully request correction of error(s) contained within the Notice of Recordation of Assignment Document in connection with the above referenced patent application as recorded at Reel 021687 and Frame 0563.

Error to be Corrected: (1) DOC Date is incorrect as 06/27/2008 as opposed to 06/27/2006.

Requested Correction:(1) Please change 06/27/2008 to 06/27/2006.

Attached are copies of the Recordation Form Cover Sheet and Notice of Recordation as mailed October 20, 2008. Applicant does not believe that any fee is due, however, if any fee is due then debit Deposit Account No. 23-2426 of Winstead PC.

5289462v.1 47005/P018WUSC1

Application No.: 12/228,487 Docket No.: 47005-P018WUSC1

Thank you in advance for your assistance. We will await receipt of the corrected version of the Notice of Recordation of Assignment Document. Please address all communications concerning this matter to the undersigned.

Dated: October 29, 2008

Respectfully submitted,

By _____

Shoaib A. Mithani
Registration No.: 61,654
WINSTEAD PC
P.O. Box 50784
Dallas, Texas 75201
(214) 745-5400
Attorneys For Applicant

PAGE 4/7 * RCVD AT 10/29/2008 4:08:20 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-5/20 * DNIS:2738300 * CSID:214 745 5711 * DURATION (mm-ss):02-04

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OCT 29 2008

UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

700387857A

OCTOBER 20, 2008

PTAS

STANLEY R. MOORE
WINSTEAD PC
P.O. BOX 50784
DALLAS, TX 75201

UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 571-272-3350. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, MAIL STOP: ASSIGNMENT SERVICES BRANCH, P.O. BOX 1450, ALEXANDRIA, VA 22313.

RECORDATION DATE: 10/15/2008 REEL/FRAME: 021687/0563
NUMBER OF PAGES: 6

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).
DOCKET NUMBER: 47005-PO18WUSC1

ASSIGNOR:
PROS, JAUME ANGUERA DOC DATE: 06/27/2008

ASSIGNOR:
BALIARDA, CARLES PUENTE DOC DATE: 06/26/2006

ASSIGNEE:
FRACTUS S.A.
C. ALCALDE BARNILS, 64-68
EDIFICIO TESTA - MODULO C, 3,
PARQUE EMPRESARIAL SANT JOAN,
SANT CUGAT DEL VALLES
BARCELONA, SPAIN E-08190

SERIAL NUMBER: 12220187 FILING DATE: 08/13/2008
PATENT NUMBER: ISSUE DATE:
TITLE: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES

P.O. Box 1450, Alexandria, Virginia 22313-1450 - www.uspto.gov

021687/0563 PAGE 2

KIMBERLY WHITE, EXAMINER
ASSIGNMENT SERVICES BRANCH
PUBLIC RECORDS DIVISION

10/15/2008
700387857

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OCT 29 2008

Form PTO-1595 (Rev 03/06)
OMB No. 0651-0027 (exp. 6/31/2006)

U.S. DEPARTMENT OF COMMERCE
United States Patent and Trademark Office

RECORDATION FORM COVER SHEET
PATENTS ONLY

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies):
Jaume Anguera Pros (06/27/2006) and Carles Puente Ballarda (06/26/2006)

Additional name(s) of conveying party(ies) attached? [ ] Yes [x] No

2. Name and address of receiving party(ies)
Name: Freclus, S.A.
Internal Address:
Street Address:
C. Alcalde Barnils, 64-88
Edificio Testa - Módulo C, 3º
Parque Empresarial Sant Joan
Sant Cugat del Vallés
City: Barcelona
State:
Country: Spain Zip: E-08190
Additional name(s) & address(es) attached? [ ] Yes [x] No

3. Nature of conveyance/Execution Date(s):
Execution Date(s): In parentheses after inventor name
[x] Assignment [ ] Merger [ ] Change of Name
[ ] Security Agreement [ ] Joint Research Agreement
[ ] Government Interest Assignment
[ ] Executive Order 9424, Confirmatory License
[ ] Other

4. Application or patent number(s):
[ ] This document is being filed together with a new application.
A. Patent Application No.(s)
12/228,467
B. Patent No.(s)
Additional numbers attached? [ ] Yes [x] No

5. Name and address to whom correspondence concerning document should be mailed:
Name: Stanley R. Moore
WINSTEAD PC
Internal Address: Atty. Dkt.: 47005-P018WUSC1
Street Address: P.O. Box 50784
City: Dallas
State: TX Zip: 75201
Phone Number: (214) 745-5110
Fax Number: (214) 745-5390
Email Address: smoore@winstead.com

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 1.21(h) & 3.41) $ 40.00
[ ] Authorized to be charged by credit card
[x] Authorized to be charged to deposit account
[ ] Enclosed
[ ] None required (government interest not affecting title)

8. Payment Information
a. Credit Card Last 4 Numbers
Expiration Date
b. Deposit Account Number: 23-2426
Authorized User Name: Stanley R. Moore

9. Signature:
Signature
October 15, 2008
Date
Shoaib A. Mithani - 61,654
Name of Person Signing
Total number of pages including cover sheet, attachments, and documents: 6

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted by facsimile to the Patent and Trademark Office, facsimile no. (571) 273-0140, on the date shown below.

Dated: October , 2008 Signature: (Brenda I. Brown)

S283488v.1 47005/P018WUSC1

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
12/228,487	08/13/2008	2821	1160	47005-P018WUSC1	15	2

CONFIRMATION NO. 6222

61060
WINSTEAD PC
P.O. BOX 50784
DALLAS, TX 75201

UPDATED FILING RECEIPT

OC00000032850194

Date Mailed: 10/30/2008

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Applicant(s)

Jaume Anguera Pros, Vinaros, SPAIN;
Carles Puente Baliarda, Barcelona, SPAIN;

Power of Attorney: The patent practitioners associated with Customer Number 61060

Domestic Priority data as claimed by applicant

This application is a CON of 10/584,442 07/18/2006 PAT 7,423,592
which is a 371 of PCT/EP2005/000880 01/28/2005
and claims benefit of 60/540,450 01/30/2004

Foreign Applications

If Required, Foreign Filing License Granted: 09/02/2008

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 12/228,487**

Projected Publication Date: 02/05/2009

Non-Publication Request: No

Early Publication Request: No

Title

Multi-band monopole antennas for mobile communications devices

Preliminary Class

343

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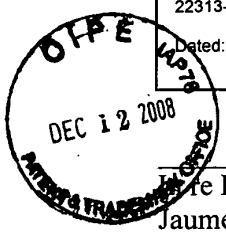
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Dated: December 8, 2008 Signature: Brenda I. Brown
(Brenda I. Brown)



Docket No.: 47005-P018WUSC1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jaume Anguera Pros et al.

Application No.: 12/228,487 — Confirmation No.: 6222

Filed: August 13, 2008 — Art Unit: 2821

For: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES — Examiner: Not Yet Assigned

INFORMATION DISCLOSURE STATEMENT (IDS)

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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Applicant has not submitted copies of each cited U.S. patent and U.S. patent application in accordance with 37 CFR 1.98(a)(2). Applicant has not supplied copies of any cited non-patent documents and foreign patent documents because they were previously cited by or submitted to the Office in prior application number 10/584,442 filed July 18, 2006 and relied upon in this application for an earlier filing date under 35 U.S.C. 120.

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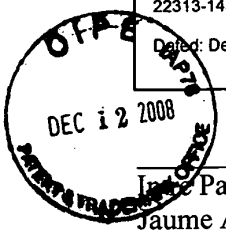
Dated: December 08, 2008

Respectfully submitted,

By _____
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Attorneys For Applicant

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jaume Anguera Pros et al.

Application No.: 12/228,487 Confirmation No.: 6222

Filed: August 13, 2008 Art Unit: 2821

For: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES Examiner: Not Yet Assigned

INFORMATION DISCLOSURE STATEMENT (IDS)

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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Attorneys For Applicant

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 8

Complete if Known	
Application Number	12/228,487-Conf. #6222
Filing Date	August 13, 2008
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	Not Yet Assigned
Attorney Docket Number	47005-P018WUSC1

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AA*	US-5,929,825	07-27-1999	Niu et al.	
	AB*	US-6,166,694	12-26-2000	Ying et al.	
	AC*	US-6,111,545	08-29-2000	Saari et al.	
	AD*	US-6,112,102	08-29-2000	Zhinong et al.	
	AE*	US-6,329,962-A1	12-11-2001	Ying et al.	
	AF*	US-20010002823-A1	06-07-2001	YING	
	AG*	US-20020080088-A1	06-27-2002	Boyle	
	AH*	US-20020175866-A1	11-28-2002	Gram	
	AI*	US-6,104,349	08-15-2000	Cohen	
	AJ*	US-6,307,511	10-23-2001	Ying et al.	
	AK*	US-20020000940-A1	01-03-2002	MOREN et al.	
	AL*	US-6,337,663	01-08-2002	Chi-Ming et al.	
	AM*	US-6,664,930-A1	12-16-2003	Wen et al.	
	AN*	US-5,870,066	02-09-1999	Asakura et al.	
	AO*	US-5,963,871	10-05-1999	Zhinong et al.	
	AP*	US-20020190904-A1	12-19-2002	Cohen	
	AQ*	US-20040027295-A1	01-04-2005	Huber et al.	
	AR*	US-20040095289-A1	05-24-2005	Bae et al.	
	AS*	US-6,445,352	09-03-2002	Cohen	
	AT*	US-20020044090-A1	04-18-2002	Bahr et al.	
	AU*	US-6,130,651	10-10-2000	Yanagisawa et al.	
	AV*	US-6,459,413-A1	10-01-2002	Tseng et al.	
	AW*	US-6,864,854-A1	03-08-2005	Dai et al.	
	AX*	US-4,123,756	10-31-1978	Nagata et al.	
	AY*	US-4,389,651	06-21-1983	Tomasky	
	AZ*	US-5,337,065	08-09-1994	Bonnet et al.	
	AA1*	US-5,572,223	11-05-1996	Phillips et al.	
	AB1*	US-5,943,020	08-24-1999	Liebendoerfer et al.	
	AC1*	US-6,271,794	08-07-2001	Geeraert et al.	
	AD1*	US-6,384,790-A1	05-07-2002	Dishart et al.	
	AE1*	US-6,822,611-A1	11-23-2004	Kontogeorgakis et al.	
	AF1*	US-6,337,667	01-08-2002	Ayala et al.	
	AG1*	US-20010050637-A1	12-13-2001	Aoyama et al.	
	AH1*	US-20030210187-A1	06-08-2004	Wong et al.	
	AI1*	US-20070046548	03-01-2007	Pros et al.	
	AJ1*	US-20070152894	07-05-2007	Sanz et al.	
	AK1*	US-6,950,071	09-27-2005	Wen	
	AL1*	US-20040140938	07-22-2004	Kadambi	
	AM1	US-120020149527	10-17-2002	Wen	
	AN1*	US-20040004574	01-08-2004	Wen	
	AO1*	US-7,057,560	06-06-2006	Erkocevic	
	AP1*	US-20040212545	10-28-2004	Li	
	AQ1*	US-7,126,537	10-24-2006	Cohen	
	AR1*	US-4,578,654	03-25-1986	Tait	
	AS1*	US-5,608,417	03-04-1997	de Vall	
	AT1*	US-5,990,849	11-23-1999	Salvail et al.	
	AU1*	US-7,289,072-B2	10-30-2007	Sakurai, Masanori	

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(Based on PTO 08-08 version)

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 2 of 8

Complete if Known	
Application Number	12/228,487-Conf. #6222
Filing Date	August 13, 2008
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	Not Yet Assigned
Attorney Docket Number	47005-P018WUSC1

	AV1*	US-6,882,320-B2	04-19-2005	Park et al.	
	AW1*	US-7,081,857-B2	07-25-2006	Kinnunen et al.	
	AX1*	US-2007/0103371-A1	05-10-2007	Kim et al.	
	AY1*	US-2007/0152887	07-05-2007	Castany et al.	
	AZ1*	US-2006/0028380	02-09-2006	Harano, Nobuya	
	AA2*	US-2007/0024508	02-01-2007	Lee, Hyok	
	AB2*	US-2003/0137459	07-24-2003	Kim et al.	
	AC2*	US-2007/0194997	08-23-2007	Nakanishi et al.	
	AD2*	US-2006/0033668	02-16-2006	Ryu	
	AE2*	US-2006/0170610	08-03-2006	Rabinovich et al.	
	AF2*	US-2005/0237244	10-27-2005	Annabi et al.	
	AG2*	US-6,140,975	10-31-2000	Cohen	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document: Country Code[3]-Number[4]-Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T[6]
	BA**	JP-2001-217632	08-10-2001	Matsushita Electric Ind. Co. Ltd.		√
	BB**	EP-0 884 796	12-16-1998	Matsushita Electronic Industrial C., Ltd.		
	BC**	EP-0 777 293	07-03-2002	Murata Manufacuring Co., Ltd.		
	BD**	EP-1 091 445	04-11-2001	Matsushita Electric Industrial Co., Ltd.		
	BE**	WO-01/54225	07-26-2001	Fractus, S.A.		
	BF**	WO-01/11721	02-15-2001	Allgon AB		
	BG**	GB-2 361 584	10-24-2001	Motorola Limited		
	BH**	WO-00/77884	12-21-2000	Harada Industries (Europe) Limited		
	BI**	WO-2004/0025778	03-25-2004	Fractus S.A.		
	BJ**	EP-0 986 130	03-15-2000	Siemens AG		
	BK**	EP-1 237 224	09-04-2002	Siemens AG		
	BL**	EP-1 198 027	04-17-2002	The Furukawa Electric Co., Ltd.		
	BM**	WO-01/48861	07-05-2001	Allgon AB		
	BN**	WO-02/35646	05-02-2002	Fractus-Ficosa International, UTE		
	BO**	WO-99/56345	11-04-1999	Intenna Technology AB		
	BP**	WO-96/38881	12-05-1996	Ericsson Inc.		
	BQ**	WO-01/26182	04-12-2001	Smarteq Wireless AB		
	BR**	EP-1367671	12-03-2003	Ngk Spark Plug Co., Ltd.		
	BS	WO-0235652	05-02-2002	ACE Technology		
	BT	WO-2005076409	08-18-2005	Fractus SA		

Examiner Signature		Date Considered	

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(Based on PTO 08-08 version)

Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	12/228,487-Conf. #6222
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				Art Unit	2821
(Use as many sheets as necessary)				Examiner Name	Not Yet Assigned
Sheet	3	of	8	Attorney Docket Number	47005-P018WUSC1

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Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	CA**	C. Puente et al., "Small But Long Koch Fractal Monopole", Electronics Letters, January 8, 1998, vol. 34, no. 1, pages 9-10	
	CB**	Carles Puente Baliarda et al., "The Koch Monopole: A Small Fractal Antenna", IEEE Transactions on Antennas and Propagation, vol. 48, no. 11, November 2000, pages 1773-1781	
	CC**	Nathan Cohen, "Fractal Antenna Applications in Wireless Telecommunications", IEEE, 1997, pages 43-49	
	CD**	C. Puente et al., "Multiband Properties of a Fractal Tree Antenna Generated by Electrochemical Deposition", Electronics Letters, December 5, 1996, vol. 32, no. 25, pages 2298-2299	
	CE	SIM, "An Internal Triple-band antenna for PCS/IMT-2000/Bluetooth Applications", IEEE Antennas and Wireless Propagation Letters, 2004, vol. 3	

Examiner Signature		Date Considered	

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(4)

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7081857	B2	2006-07-25	KINNUNEN ET AL	
	2	6275198	B1	2001-08-14	KENOUN ET AL	
	3	7289072	B2	2007-10-30	SAKURAI	
	4	5943020		1999-08-24	LIEBENDOERFER ET AL	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20070152894	A1	2007-07-05	SANZ ET AL	
	2	20070046578	A1	2007-03-01	PROS ET AL	

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FOREIGN PATENT DOCUMENTS

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	1011167	EP	A1	2000-06-21	MATSUSHITA ELECTRIC INDUSTRIAL CO.		☐
	2	2004/057701	WO	A1	2004-07-08	FRACTUS		☐
	3	99/67851	WO	A1	1999-12-29	ALLGON AB		☐
	4	00/03451	WO	A1	2000-01-20	MOTECO AB		☐

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
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	Application Number	12222848
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20030184482	A1	2003-10-02	BETTIN	
	2	20020000940	A1	2002-01-03	MOREN	

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FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	02078123	WO	A1	2002-10-03	TELEFONAKTIEBOLAGET L.M. ERICSSON		☐
	2	0003451	WO	A1	2002-01-20	MATECO AB		☐

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	1	COHEN, N. Fractal antenna applications in wireless telecommunications, Professional Program Proceedings, Electronics Industries Forum of New England, May 1997.	☐

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Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6674405	B2	2004-01-06	WANG	
	2	6839040	B2	2005-01-04	HUBER	

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	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

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	1	Handbook of antennas in wireless communications, CRC Press, 2002	☐

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U.S.PATENTS

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	1	6950071	B2	2005-09-27	WEN	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20040140938	A1	2004-07-22	KADAMBI	
	2	20020149527	A1	2002-10-17	WEN	
	3	20040004574	A1	2004-01-08	WEN	

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	Art Unit	2821
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	1	WONG, Planar antennas for wireless communications, Wiley Interscience, 2003	☐

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	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7057560	B2	2006-06-06	ERKOCEVIC	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20040212545	A1	2004-10-28	LI	

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	1	0235652	WO	A1	2002-05-02	ACE TECHNOLOGY		☐
	2	2005076409	WO	A1	2005-08-18	FRACTUS		☐

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	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Not Yet Assigned
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	1	WONG, Planar antennas for wireless communications, John Wiley & Sons, 2003	☐
	2	SIM, An internal triple-band antenna for PCS/IMT-2000/Bluetooth applications, IEEE Antennas and Wireless Propagation Letters, 2004, Vol. 3	☐

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	First Named Inventor	Jaume Anguera Pros
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	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

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	1	5572223		1996-11-05	PHILLIPS	
	2	6384790	B2	2002-05-07	DISHART	
	3	7126537	B2	2006-10-24	COHEN	
	4	7069043	B2	2006-06-27	SAWAMURA	
	5	4123756		1978-10-31	NAGATA	

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	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
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Application Number	12/228,487
Filing Date	8-13-2008
First Named Inventor	JAUME ANGUERA PROS
Art Unit	2821
Examiner Name	NA
Attorney Docket Number	47405-0018WUSC1

U.S.PATENTS						
Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	4389651		1983-06-21	TOMASKY	
	2	5337065		1994-08-09	BONNET ET AL.	
	3	5943020		1999-08-24	LIEBENDOERFER ET AL.	
	4	6271794		2001-08-07	GEERAERT	
	5	6822611		2004-11-23	KONTOGEORGAKIS ET AL	
	6	6963310		2005-11-08	HORITA ET AL.	
	7	7068230		2006-06-27	QI ET AL.	

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Application Number	~~10584442~~ 12/228,487
Filing Date	~~2006-06-16~~ 8-13-2008
First Named Inventor	JAUME ANGUERA PROS
Art Unit	2821
Examiner Name	NA
Attorney Docket Number	~~68349-00025USPX~~ 41005-P018WUSC1

(17)

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20050259031		2005-11-24	SANZ ET AL.	

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	First Named Inventor	Dros
	Art Unit	2821
	Examiner Name	
	Attorney Docket Number	47005-P018W45C1

U.S.PATENTS						
Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6343208	B1	2002-01-29	YING	
	2	6614400	B2	2003-10-02	EGOROV	
	3	5248988		1993-09-28	MAKINO	
	4	5457469		1995-10-10	DIAMOND	
	5	5990838		1999-11-23	BURNS	
	6	5986610		1999-11-16	MIRON	
	7	6266023	B1	2001-07-24	NAGY	
	8	6801164	B2	2004-10-05	BIT-BABIK	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12/228,487
	Filing Date	8-13-2008
	First Named Inventor	Pros
	Art Unit	2821
	Examiner Name	
	Attorney Docket Number	47005-P018W4SC1

(19)

	9	6281846	B1	2001-08-28	PUENTE	
	10	4123756		1978-10-31	NAGATA	
	11	5572223		1996-11-05	PHILLIPS	
	12	6384790	B2	2002-05-07	DISHART	
	13	7126537	B2	2006-10-24	COHEN	
	14	7069043	B2	2006-06-27	SAWAMURA	

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	1	20020140615	A1	2002-10-03	PUENTE BALIARDA	
	2	20010050637	A1	2001-12-13	AOYAMA	

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(20)

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	1	2004042868	WO	A1	2004-05-21	FRACTUS		☐
	2	1367671	EP	A2	2003-12-03	NGK SPARK PLUG CO. LTD.		☐
	3	03034538	WO	A1	2003-04-24	FRACTUS		☐
	4	0938158	EP	A2	1999-02-17	NOKIA MOBILE PHONES LTD.		☐
	5	03034544	WO	A1	2003-04-24	FRACTUS SA		☐
	6	2004001894	WO	A1	2003-12-31	FRACTUS SA		☐
	7	02078123	WO	A1	2002-10-03	TELEFONAKTIEBOLAG ET LM ERICSSON		☐
	8	2001332924	JP		2001-11-30	SHARP KK		☐
	9	10247808	JP		1998-09-14	MURATA MANUFACTURING		☐
	10	2002050919	JP		2002-02-15	TAIYO YUDEN		☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12/228,481
	Filing Date	08/13/2008
	First Named Inventor	Pros
	Art Unit	2821
	Examiner Name	
	Attorney Docket Number	47005-P018U45C1

(21)

	11	0938158	EP		1999-08-25	NOKIA MOBILE PHONES LTD		☐

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	1	PUENTE, Fractal antennas, Universitat Politècnica de Catalunya, 1997	☐
	2	PUENTE, Multiband fractal antennas and arrays, Fractals engineering - from theory to industrial applications, 1994	☐
	3	NAKANO et al. Realization of dual-frequency and wide-band VSWR performances using normal-mode helical and inverted-F antennas, IEEE Transactions on Antennas and Propagation, 1998, vol. 46, No. 6	☐
	4	MORISHITA et al., Design concept of antennas for small mobile terminals and the future perspective, IEEE Antennas and Propagation Magazine, 2002	☐
	5	DOU et al, Small broadband stacked planar monopole, Willey Interscience, 2000	☐
	6	STRUGATSKY, Multimode multiband antenna. Tactical communications: Technology in transition. Proceedings of the tactical communications conference, 1992	☐
	7	SZKIPALA, Fractal antennas, TEAT, 2001	☐

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12/228,487
	Filing Date	08/13/2008
	First Named Inventor	Ros
	Art Unit	2821
	Examiner Name	
	Attorney Docket Number	47005-P018W4SC1

EXAMINER SIGNATURE			
Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 12/228,487	Filing Date 08/13/2008	☐ To be Mailed

APPLICATION AS FILED – PART I

	(Column 1)	(Column 2)	SMALL ENTITY ☐		OR	OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE ($)	FEE ($)		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

		(Column 1)		(Column 2)	(Column 3)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
	12/12/2008	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)		RATE ($)	ADDITIONAL FEE ($)
AMENDMENT	Total (37 CFR 1.16(i))	* 15	Minus	** 20	= 0	X $ =		OR	X $52=	0
	Independent (37 CFR 1.16(h))	* 1	Minus	***3	= 0	X $ =		OR	X $220=	0
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	0

		(Column 1)		(Column 2)	(Column 3)					
		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)		RATE ($)	ADDITIONAL FEE ($)
AMENDMENT	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
/WILLIAM N. PHILLIPS/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service on the date shown below with sufficient postage as First Class Mail, in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: December 23, 2008 Signature: (Brenda I. Brown)

OIPE DEC 29 2008 PATENT & TRADEMARK OFFICE

Docket No.: 47005-P018WUSC1 (PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jaume Anguera Pros et al.

Application No.: 12/228,487 Confirmation No.: 6222

Filed: August 13, 2008 Art Unit: 2821

For: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES Examiner: Not Yet Assigned

INFORMATION DISCLOSURE STATEMENT (IDS)

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Madam:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed before the mailing date of a first Office Action on the merits, as far as is known to the undersigned (37 CFR 1.97(b)(3)).

Applicant has not submitted copies of each cited U.S. patent and U.S. patent application in accordance with 37 CFR 1.98(a)(2). Applicant submits herewith copies of any cited non-patent documents and foreign patent documents in accordance with 37 CFR 1.98(a)(2).

In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing of this Information Disclosure Statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 23-2426, under Order No. 47005-P018WUSC1.

Dated: December 23, 2008

Respectfully submitted,

By _____
Shoaib A. Mithani
Registration No.: 61,654
WINSTEAD PC
P.O. Box 50784
Dallas, Texas 75201
(214) 745-5400
Attorneys For Applicant

JIPE IAP13
DEC 29 2008
PATENT & TRADEMARK OFFICE

PTO/SB/08a (08-03)
Approved for use through 07/31/2006. OMB 0651-0031
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	12228487
Filing Date	2008-08-13
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	Not Yet Assigned
Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6995720	B2	2006-02-07	SHIKATA	
	2	7403164		2008-07-22	SANZ ET AL	
	3	7411556		2008-08-12	SANZ ET AL	
	4	6243592		2001-06-05	NAKADA ET AL	

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20070152984	A1	2007-07-05	ORDING ET AL	

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FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]

OIPE IAP39 DEC 29 2008 PATENT & TRADEMARK OFFICE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Application Number	12228487
Filing Date	2008-08-13
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	Not Yet Assigned
Attorney Docket Number	47005-P018WUSC1

OIPE IAP13 DEC 29 2008 PATENT & TRADEMARK OFFICE

	1	62-262502	JP		1987-11-14	YUNIDEN KK		☒
	2	2003-347835	JP		2003-12-05	MURATA		☒
	3	2001-251128	JP		2001-09-14	MATSUSHITA ELECTRIC		☒
	4	10-200327	JP		1998-07-31	SHARP		☒
	5	10-117108	JP		1998-05-06	MATSUSHITA ELECTRIC		☒

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NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
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UNITED STATES PATENT AND TRADEMARK OFFICE

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United States Patent and Trademark Office
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www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/228,487	08/13/2008	Jaume Anguera Pros	47005-P018WUSC1

CONFIRMATION NO. 6222

61060
WINSTEAD PC
P.O. BOX 50784
DALLAS, TX 75201

PUBLICATION NOTICE

OC000000034404112

Title: Multi-band monopole antennas for mobile communications devices

Publication No.US-2009-0033561-A1
Publication Date:02/05/2009

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

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In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently http://pair.uspto.gov/. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Application Number	12228487
Filing Date	2008-08-13
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	Not Yet Assigned
Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6897830	B2	2005-05-24	BAE ET AL	

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

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Dated: May 29 2009 Signature: (Brenda I. Brown)

Docket No.: 47005-P018WUSC1
(PATENT)

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JUN 02 2009
PATENT & TRADEMARK OFFICE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jaume Anguera Pros et al.

Application No.: 12/228,487 Confirmation No.: 6222

Filed: August 13, 2008 Art Unit: 2821

For: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES Examiner: Not Yet Assigned

INFORMATION DISCLOSURE STATEMENT (IDS)

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

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The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 23-2426, under Order No. 47005-P018WUSC1.

Dated: May 21, 2009

Respectfully submitted,

By _____
Shoaib A. Mithani
Registration No.: 61,654
WINSTEAD PC
P.O. Box 50784
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(214) 745-5400
Attorneys For Applicant

PTO/SB/08a (08-03)
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	Filing Date	2009-08-13
	First Named Inventor	Jaume Anguera Pros et al.
	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5841402		1998-11-24	DIAS, D.	
	2	7205954	B2	2007-04-17	YAMAGAJO	
	3	7202821	B2	2007-04-10	FUJIKAWA	

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20060135090	A1	2006-06-22	ANNAMAA, P.	
	2	20060176225	A1	2006-08-10	ANNAMAA, P.	
	3	20040147297	A1	2004-07-29	MIKKOTA, J.	

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FOREIGN PATENT DOCUMENTS

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487
	Filing Date	2009-08-13
	First Named Inventor	Jaume Anguera Pros et al.
	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐

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	1		☐

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Examiner Signature		Date Considered	

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[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

Electronic Acknowledgement Receipt

EFS ID:	6116430
Application Number:	12228487
International Application Number:	
Confirmation Number:	6222
Title of Invention:	Multi-band monopole antennas for mobile communications devices
First Named Inventor/Applicant Name:	Jaume Anguera Pros
Customer Number:	61060
Filer:	Shoaib Amirali Mithani
Filer Authorized By:	
Attorney Docket Number:	47005-P018WUSC1
Receipt Date:	22-SEP-2009
Filing Date:	13-AUG-2008
Time Stamp:	09:59:36
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		47005IDS.PDF	70130 a042958c516a8131ac3051ee83c01e6bc294dfc8	yes	4

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Transmittal Letter	1	2
	Information Disclosure Statement (IDS) Filed (SB/08)	3	4
Warnings:			
Information:			
	Total Files Size (in bytes):	70130	

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New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted via the Office electronic filing system in accordance with § 1.6(a)(4).

Dated: September 22, 2009
Electronic Signature for Shoaib A. Mithani: /Shoaib A. Mithani/

Docket No.: 47005-P018WUSC1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jaume Anguera Pros et al.

Application No.: 12/228,487 | Confirmation No.: 6222

Filed: August 13, 2008 | Art Unit: 2821

For: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES | Examiner: Not Yet Assigned

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MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

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It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 23-2426, under Order No. 47005-P018WUSC1.

Dated: September 22, 2009

Respectfully submitted,

Electronic signature: /Shoaib A. Mithani/
Shoaib A. Mithani
Registration No.: 61,654
WINSTEAD PC
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PTO/SB/08a (08-03)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99**)		
	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros et al.
	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7511675		2009-03-31	PUENTE, CARLES	

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20090248112		2009-10-01	MUMBRU, JOSEP	
	2	20090140942		2009-06-04	MIKKOLA, JYRKI	

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FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
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NON-PATENT LITERATURE DOCUMENTS

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	First Named Inventor	Jaume Anguera Pros et al.
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	Attorney Docket Number	47005-P018WUSC1

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
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Electronic Acknowledgement Receipt

EFS ID:	6742937
Application Number:	12228487
International Application Number:	
Confirmation Number:	6222
Title of Invention:	Multi-band monopole antennas for mobile communications devices
First Named Inventor/Applicant Name:	Jaume Anguera Pros
Customer Number:	61060
Filer:	Shoaib Amirali Mithani
Filer Authorized By:	
Attorney Docket Number:	47005-P018WUSC1
Receipt Date:	04-JAN-2010
Filing Date:	13-AUG-2008
Time Stamp:	15:55:03
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		47005IDS.PDF	151843 e1ec5ac1b9df4543adb337132c196fd65a1ebddf	yes	4

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Transmittal Letter	1	2
	Information Disclosure Statement (IDS) Filed (SB/08)	3	4
Warnings:			
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New Applications Under 35 U.S.C. 111
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Dated: January 4, 2010
Electronic: Signature for Shoaib A. Mithani /Shoaib A. Mithani/

Docket No.: 47005-P018WUSC1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jaume Anguera Pros et al.

Application No.: 12/228,487 Confirmation No.: 6222

Filed: August 13, 2008 Art Unit: 2821

For: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES Examiner: Not Yet Assigned

INFORMATION DISCLOSURE STATEMENT (IDS)

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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Dated: January 4, 2010

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Electronic signature: /Shoaib A. Mithani/
Shoaib A. Mithani
Registration No.: 61,654
WINSTEAD PC
P.O. Box 50784
Dallas, Texas 75201
(214) 745-5400
Attorneys For Applicant

PTO/SB/08a (08-03)
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	Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6903688	B2	2005-06-07	EDVARDSSON	

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

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Electronic Acknowledgement Receipt

EFS ID:	7522177
Application Number:	12228487
International Application Number:	
Confirmation Number:	6222
Title of Invention:	Multi-band monopole antennas for mobile communications devices
First Named Inventor/Applicant Name:	Jaume Anguera Pros
Customer Number:	61060
Filer:	Ross Robinson/Brenda Brown
Filer Authorized By:	Ross Robinson
Attorney Docket Number:	47005-P018WUSC1
Receipt Date:	30-APR-2010
Filing Date:	13-AUG-2008
Time Stamp:	10:16:31
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		IDS47005P018WUSC12.PDF	64447 5e328bc5d7cddb55cf637d4e3e358fe9777d97d2	yes	4

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Transmittal Letter	1	2
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Dated: April 30, 2010
Electronic Signature for Brenda I. Brown: /Brenda I. Brown/

Docket No.: 47005-P018WUSC1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jaume Anguera Pros et al.

Application No.: 12/228,487 Confirmation No.: 6222

Filed: August 13, 2008 Art Unit: 2821

For: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES Examiner: Not Yet Assigned

INFORMATION DISCLOSURE STATEMENT (IDS)

MS Amendment
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Respectfully submitted,

Electronic signature: /Shoaib A. Mithani/
Shoaib A. Mithani
Registration No.: 61,654
WINSTEAD PC
P.O. Box 50784
Dallas, Texas 75201
(214) 745-5400
Attorneys For Applicant

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
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	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
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U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

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	Attorney Docket Number	47005-P018WUSC1

	1	Shnitkin, "Analysis of Log-Periodic Folded Dipole Array" (September 1992).	☐
	2	Sinclair, "Theory of Models of Electromagnetic Systems," Proceedings of the IRE, November 1948.	☐
	3	Snow, W. L., et al. "Ku-Band Planar Spiral Antenna," The Nineteenth Symposium on The USAF Antenna Research and Development Program, October 14 – 16, 1969.	☐
	4	Snow, W. L., "UHF Crossed-Slot Antenna and Applications," The Thirteenth Symposium on The USAF Antenna Research and Development Program, October 14 - 18, 1963.	☐
	5	Soler, J., Romeu, J., "Dual-band Sierpinski fractal monopole antenna," IEEE Antennas and Propagation Society International Symposium, 2000, Volume 3, pp. 1712 – 1715.	☐
	6	Song, C.T.P., Hall, P.T., Ghafouri-Shiraz, H. and Wake, D., "Fractal Stacked Monopole With Very Wide Bandwidth," Electronics Letters, 35, 12, June 10, 1999.	☐
	7	Stang, Abstracts of the 12th Annual Symposium (Oct.16–19, 1962).	☐
	8	Stang, Paul F., "Balanced Flush Mounted Log-Periodic Antenna for Aerospace Vehicles," Twelfth Annual Symposium on USAF Antenna Research and Development, Volume 1, October 16-19, 1962.	☐
	9	Stutzman, "Antenna Theory and Design," 2nd ed., 1998.	☐
	10	Taga, Tokio and Tsunekawa, Kouichi, "Performance Analysis of a Built-In Planar Inverted F Antenna for 800 MHz Band Portable Radio Units," IEEE Journal on Selected Areas in Communications, Vol. SAC-5, No. 5, June 1987.	☐
	11	Tanner, Robert L., et al., "Electronic Counter Measure Antennas for a Modern Electronic Reconnaissance Aircraft," The Fourth Symposium on The USAF Antenna Research and Development Program, October 17 - 21, 1954.	☐

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	Attorney Docket Number	47005-P018WUSC1

	12	Teeter, W. L. and Bushore, K. R., "A Variable-Ratio Microwave Power Divider and Multiplexer," IRE Transactions on Microwave Theory and Techniques, 5, 4, October 1957.	☐
	13	Teng, Pey-Ling and Wong, Kin-Lu, "Planar Monopole Folded Into A Compact Structure For Very Low-Profile Multiband Mobile-Phone Antenna," Microwave and Optical Technology Letters, Vol. 33, No. 1. (April 5, 2002).	☐
	14	Terman, F. E., Radio Engineering, New York, McGraw-Hill Book Company, 1947.	☐
	15	The Glen L. Martin Company, "Antennas for USAF B-57 Series Bombers" The Second Symposium on the USAF Antenna Research and Development Program, October 19-23, 1952.	☐
	16	Turner and Richard, "Development of an Electrically Small Broadband Antenna," presented at the Eighteenth Symposium on The USAF Antenna Research and Development Program, October 15-17, 1968.	☐
	17	Turner, "Broadband Passive Electrically Small Antennas for TV Application," presented at the Proceedings of the 1977 Antenna Applications Symposium on April 27-29, 1977 at Robert Allerton Park at the University of Illinois.	☐
	18	Virga, "Low-Profile Enhanced Bandwidth PIFA Antennas for Wireless Communications Packaging," IEEE Transactions on Microwave Theory and Techniques, Vol. 45, No. 10 (October 1997).	☐
	19	Volakis, J., Antenna Engineering Handbook, pp. 39-7 to -15 (4th ed. 2007).	☐
	20	Walker, G.J. and James, J.R., "Fractal Volume Antennas," Electronics Letters, 34, 16, August 6, 1998.	☐
	21	Wall, H. et al. "Communications Antennas for Mercury Space Capsule," The Eleventh Symposium on The USAF Antenna Research and Development Program, October 16 - 20, 1961.	☐
	22	Watanbe, T., Furutani, K., Nakajima, N. and Mandai, H., "Antenna Switch Duplexer for Dualband Phone (GSM/DCS) Using LTCC Multilayer Technology," IEEE MTT-S International Microwave Symposium Digest, 1, June 13-19, 1999.	☐

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	23	Weeks, W. L., Antenna Engineering, New York, McGraw-Hill Book Company, 1968.	☐
	24	Weeks, W. L., Electromagnetic Theory for Engineering Applications, New York John Wiley & Sons, 1964.	☐
	25	Wegner, E. D., B-70 Antenna System, Thirteenth Annual Symposium on USAF Antenna Research and Development, 1963.	☐
	26	Wheeler, H.A., "The Radian Sphere Around a Small Antenna," IEEE Proc., vol. 47, pp. 1325-31 (August 1959).	☐
	27	Wheeler, H. A., "Fundamental Limitations of Small Antennas," Proceedings of the I.R.E. (December 1947).	☐
	28	Wheeler, H.A., "Small Antennas," The Twenty-Third Symposium on The USAF Antenna Research and Development Program, October 10 – 12, 1973.	☐
	29	Wong, K.-L. and Yang, K.-P., "Modified planar inverted F antenna," Electronics Letters, 34, 1, January 8, 1998.	☐
	30	Wong, Kin-Lu and Sze, Jia-Yi, "Dual-Frequency Slotted Rectangular Microstrip Antenna," Electronics Letters, Vol. 34, No. 14, July 9, 1998.	☐
	31	Wong et al., "Broadband Microstrip Antennas With Integrated Reactive Loading," Microwave Conference, 1999 Asia Pacific, Nov. 1999, vol. 2, pp.352-54.	☐
	32	McDowell, E. P., "High Speed Aircraft Antenna Problems and Some Specific Solutions for MX-1554," The Second Symposium on the USAF Antenna Research and Development Program, October 19-23, 1952.	☐
	33	McDowell, E. P., "Flush Mounted X-Band Beacon Antennas for Aircraft," The Third Symposium on The USAF Antenna Research and Development Program, October 18 - 22, 1953.	☐

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	34	Parker, "Convoluted array elements and reduced size unit cells for frequency selective surfaces," IEE Proceedings-H, Antennas an Microwave Propagation, vol. 138, no. 1, Feb. 1991, p.19-22.	☐
	35	Yang and Wang, "Compact Dual-Frequency Operation of Rectangular Microstrip Antennas," IEEE, pp. 1652-55 (1999).	☐

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EXAMINER SIGNATURE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99**)		
	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS						
Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	3079602		1963-02-26	DUHAMEL	
	2	3689929		1972-09-05	MOODY	
	3	4318109		1982-03-02	WEATHERS	
	4	4356492		1982-10-26	KALOI	
	5	4536725		1985-08-20	HUBLER	
	6	4608572		1986-08-26	BLAKNEY	
	7	4860019		1989-08-22	JIANG	
	8	5014346		1991-05-07	PHILLIPS	

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	Attorney Docket Number	47005-P018WUSC1

	9	5075691		1991-12-24	GARAY	
	10	5307075		1994-04-26	HUYNH	
	11	5355318		1994-10-11	DIONNET	
	12	5363114		1994-11-08	SHOEMAKER	
	13	5453752		1995-09-25	WANG	
	14	5557293		1996-09-25	McCOY	
	15	5872546		1999-02-16	IHARA	
	16	5809433		1998-09-15	THOMPSON	
	17	5926139		1999-07-20	KORISCH	
	18	5936587		1999-08-10	GUDILEV	
	19	5986609		1999-11-16	SPALL	

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	Attorney Docket Number	47005-P018WUSC1

	20	5995052		1999-11-30	SADLER	
	21	6011699		2000-01-04	MURRAY	
	22	6094179		2000-07-25	DAVIDSON	
	23	6097339		2000-08-01	FILIPOVIC	
	24	6160513		2000-12-12	DAVIDSON	
	25	6122533		2000-09-19	ZHANG	
	26	6329951		2001-12-11	WEN	
	27	6140966		2000-10-31	PANKINAHO	
	28	6141540		2000-10-31	RICHARDS	
	29	6147655		2000-11-14	ROESNER	
	30	6181281		2001-06-30	DESCLOS	

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	31	6195048		2001-02-27	CHIBA	
	32	6198442		2001-03-06	RUTKOWSKI	
	33	6201501		2001-03-13	ARKKO	
	34	6204826		2001-03-20	RUTKOWSKI	
	35	6211826		2001-03-20	AOKI	
	36	6215474		2001-04-10	SHAH	
	37	6236366		2001-05-22	YAMAMOTO	
	38	6239765		2001-05-29	JOHNSON	
	39	6243592		2001-06-05	NAKADA	
	40	6259407		2001-07-10	TRAN	
	41	6266538		2001-07-24	WALDRON	

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	42	6288680		2001-09-11	TSURU	
	43	6300914		2001-10-09	YANG	
	44	6317084		2001-11-13	CHEN	
	45	6408190		2002-06-18	YING	
	46	6417816		2002-07-09	SADLER	
	47	6352434		2002-03-05	EMMERT	
	48	6353443		2002-03-05	YING	
	49	6366243		2002-04-02	ISOHALATA	
	50	6452553		2002-09-17	COHEN	

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear

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	1	20010044320		2001-11-22	ONO	

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FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	2224466	CN		1996-04-10	XIANCHEN		☐
	2	0590671	EP	B1	1997-12-29	SEKINE		☐
	3	0749176	EP		1996-12-18	SANAD		☐
	4	0902472	EP		1999-03-17	FUREY		☐
	5	2112163	ES		1998-11-16	BALIARDA		☐
	6	0766343	EP		1997-04-02	IHARA		☐
	7	2317994	GB		1998-04-08	KITCHENER		☐
	8	5-308223	JP		1993-11-19	KEIZO		☐

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	9	9-246852	JP		1997-09-19	HIRABE		☐
	10	10-303637	JP		1998-11-13	KUDO		☐
	11	11-004113	JP		1999-01-06	KAWABATA		☐
	12	11-136015	JP		2005-04-06	SUZUKI		☐
	13	11-220319	JP		1999-08-10	IRIYAMA		☐
	14	11-27042	JP		1999-01-29			☐
	15	60-85530	JP		1994-03-25	KANAYAMA		☐
	16	H6-252629	JP		1994-09-09	KURODA		☐
	17	H10-163748	JP		2010-05-12	NAKADA		☐
	18	88/09065	WO		1988-11-17	COLEMAN		☐
	19	98/05088	WO		1998-02-05	SCHAMBERGER		☐

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	20	98/20578	WO		1998-05-14	GUDILEV		☐
	21	99/65102	WO		1999-12-16	DUPONT		☐
	22	01/17063	WO		2001-03-08	YING		☐
	23	01/56111	WO		2001-08-02	RITCHER		☐
	24	9903166	WO		1999-01-21	GAMALIELSSON		☐
	25	9927608	WO		1999-06-03	COHEN		☐
	26	0108257	WO		2001-02-01	ROWELL		☐
	27	0122528	WO		2001-03-29	BALIARDA		☐
	28	0133665	WO		2001-05-10	JOHNSON		☐

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NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T5

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	1	Adcock, M. D., "New Type Feed for High Speed Conical Scanning," The Second Symposium of the USAF Antenna Research and Development Program, October 19-23, 1952	☐
	2	Andersen, J. B., "Low- and Medium-Gain Microwave Antennas," in A. W. Rudge, K. Milne, A. D. Olver, and P. Knight (eds.), The Handbook of Antenna Design, Volumes 1 and 2, London, Peter Peregrinus Ltd., 1986.	☐
	3	Azadegan and Sarabandi, Design of Miniature Slot Antennas, IEEE Antennas and Propagation Society International Symposium, 2001 Digest, vol. 4 pp. 565 - 568 (July 8, 2001).	☐
	4	Balanis, "Antenna Theory: Analysis and Design," John Wiley & Sons: 1997.	☐
	5	Barrick, William, "A Helical Resonator Antenna Diplexer," The Tenth Symposium on The USAF Antenna Research and Development Program, October 3 - 7, 1960.	☐
	6	Batson, D. et al., "VHF Unfurlable Turnstile Antennas," The Nineteenth Symposium on The USAF Antenna Research and Development Program, October 14 – 16, 1969	☐
	7	Besthorn, J.W., "1.0-to 21.0-GHz Log-Periodic Dipole Antenna," presented at the Eighteenth Annual Symposium on The USAF Antenna Research and Development Program, October 15–17, 1968.	☐
	8	Blackband, W. T., "Coaxial Transmission Lines and Components," in A. W. Rudge, K. Milne, A. D. Olver, and P. Knight (eds.), The Handbook of Antenna Design, Volumes 1 and 2, London, Peter Peregrinus Ltd., 1986	☐
	9	Bokhari, S.A., Zurcher, J.F., Mosig, J.R. and Gardiol, F. E., "A Small Microstrip Patch Antenna with a Convenient Tuning Option," IEEE Transactions on Antennas and Propagation, Vol. 44, No. 11, November 1996.	☐
	10	"Broadband Passive Electrically Small Antennas for TV Application," presented at the Proceedings of the 1977 Antenna Applications Symposium on April 27-29, 1977 at Robert Allerton Park at the University of Illinois.	☐
	11	Brown, A. R. and Rebeiz, G. M. "A High-Performance Integrated K-Band Diplexer," IEEE Transactions on Microwave Theory and Techniques, 47, 8, August 1999.	☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	12	Burnett, G. F., "Antenna Installations on Super Constellation Airborne Early Warning and Control Aircraft," The Fourth Symposium on The USAF Antenna Research and Development Program, October 17 - 21, 1954.	☐
	13	Bushman, F. W. et al., "The Boeing B-52 All Flush Antenna System," The Fifth Symposium on The USAF Antenna Research and Development Program, October 16 - 20, 1955.	☐
	14	Campi, M., "Design of Microstrip Linear Array Antennas," 1981 Antenna Applications Symposium, September 23 – 25, 1981	☐
	15	Carver, Keith R. and Mink, James W., "Microstrip Antenna Technology," IEEE Transactions on Antennas and Propagation, AP-29, 1, January 1981, pp. 2-24.	☐
	16	Chen, "Dual Frequency Microstrip Antenna with Embedded Reactive Loading," Microwave and Optical Technology Letters, vol. 23, no.3, Nov.5, 1999.	☐
	17	Chen, "Square-Ring Microstrip Antenna with a Cross Strip for Compact Circular Polarization Operation", IEEE Transactions on Antennas and Propagation, vol. 47, no. 10, Oct. 1999.	☐
	18	Chen, M. H., Tung, T. X. and Yodokawa, T. "A Compact EHF/SHF Dual Frequency Antenna," IEEE International Symposium on Antennas and Propagation Digest, 4, May 7-11, 1990.	☐
	19	Chiba, N., Amano, T. and Iwasaki, H., "Dual-Frequency Planar Antenna for Handsets," Electronics Letters, 34, 35, December 10, 1998, pp. 2362-2363.	☐
	20	Cohen, "NEC4 Analysis of a Fractalized Monofilar Helix in an Axial Mode," CONFERENCE PROCEEDINGS VOLUME II for the 14th Annual Review of Progress in APPLIED COMPUTATIONAL ELECTROMAGNETICS at the Naval Postgraduate School in Montery, CA, March 16-20, 1998.	☐
	21	Cohen, Nathan, "Fractal Element Antennas," Journal of Electronic Defense, July 1997.	☐
	22	Cohn, S. B., "Flush Airborne Radar Antennas," The Third Symposium on The USAF Antenna Research and Development Program, October 18 - 22, 1953.	☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Attorney Docket Number	47005-P018WUSC1

	23	Collier and Shnitkin, "Summary of The Monopole as a Wideband Array Antenna Element," presented at the 1993 Antenna Applications Symposium on September 23, 1993.	☐
	24	Contreras, "Fractal Miniature Antenna" UPC Baix Llobregat Polytechnic University Project Research (September 1997).	☐
	25	Daniel, Kumar, "Rectangular Microstrip Antennas with stub along the non-radiating edge for Dual Band Operation," IEEE Antennas and Propagation Society International Symposium 1995 Digest, vol.4, p.2136-2139.	☐
	26	Deschamps, G. et al., "Microstrip Microwave Antenna," The Third Symposium on The USAF Antenna Research and Development Program, October 18 – 22, 1953.	☐
	27	Dickstein, Harold D., "Antenna System for a Ground Passive Electronic Reconnaissance Facility," The Eighth Symposium on The USAF Antenna Research and Development Program, October 20 - 24, 1958.	☐
	28	DuHamel R. H. and Isbell, D. E., "Broadband Logarithmically Periodic Antenna Structures," IRE International Convention Record, 5, Part 1, March 1957, pp. 119- 128.	☐
	29	Du Plessis, "Tuning Stubs for Microstrip Patch Antennas," IEEE Antennas and Propagation Magazine, vol. 36, issue 6, pp. 52-56, 1993.	☐
	30	Dyson, J.D., "The Non-Planar Equiangular Spiral Antenna," The Eighth Symposium on The USAF Antenna Research and Development Program, October 20 – 24, 1958.	☐
	31	Dyson, J.D., "The Equiangular Spiral Antenna," The Fifth Symposium on The USAF Antenna Research and Development Program, October 16 – 20, 1955.	☐
	32	Ellis, A.R., "Airborne U-H-F Antenna Pattern Improvements," The Third Symposium on The USAF Antenna Research and Development Program, October 18 – 22, 1953.	☐
	33	Esteban, J. and Rebollar, J. M., "Design and Optimization of a Compact Ka-Band Antenna Diplexer," IEEE International Symposium on Antennas and Propagation Digest, 1, June 18-23, 1995, pp. 148-151.	☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	34	ETSI, "Global System for Mobile Communications: Digital cellular telecommunications system (Phase 2); Mobile Station (MS) conformance specification; Conformance specification (GSM 11.10-1)," European Telecommunication Standard, March 1996.	☐
	35	ETSI, "Global System for Mobile Communications: Digital cellular telecommunications system (Phase 2+); Abbreviations and acronyms (GSM 01.04)," GSM Technical Specification, Version 5.0.0, March 1996.	☐
	36	ETSI, "Global System for Mobile Communications: Digital cellular telecommunications system (Phase 2); Types of Mobile Stations (MS) (GSM 02.06)," European Telecommunication Standard, 3rd ed., May 1996.	☐
	37	ETSI, "Global System for Mobile Communications: Digital cellular telecommunications system (Phase 2+); Radio transmission and reception (GSM 05.05)," GSM Technical Specification, Version 5.2.0, July 1996.	☐
	38	ETSI, "Global System for Mobile Communications: Digital cellular telecommunications system (Phase 2); Mobile Station (MS) conformance specification; Part 1: Conformance specification (GSM 11.10-1 version 4.21.1)," European Telecommunication Standard, 8th ed., August 1998.	☐
	39	Fenwick, R., "A New Class of Electrically Small Antennas," Presented at the Fourteenth Annual Symposium on USAF Antenna Research and Development, presented Oct. 6-8, 1964.	☐
	40	Ferris, J. E. et al., "A Status report of an Azimuth and Elevation Direction Finder" The Eighteenth Symposium on The USAF Antenna Research and Development Program, October 15 – 17, 1968.	☐
	41	Force, R.D., et al. "Synthesis of Multilayer Walls for Radomes of Aerospace Vehicles," The Seventeenth Symposium on The USAF Antenna Research and Development Program, November 14 – 17, 1967.	☐
	42	Photos of Fractus Panel 01 product (at least as early as 1998)	☐
	43	Photos of Fractus MSPK product (at least as early as 1998)	☐
	44	Gilbert, R., Structurally-Integrated Optically-Reconfigurable Antenna Array 1995 Antenna Applications Symposium, September 20 - 22, 1995.	☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	45	Gillespie, Edmond S., "Glide Slope Antenna in the Nose Radome of the F104A and B," The Seventh Symposium on The USAF Antenna Research and Development Program, October 21 – 25, 1957.	☐
	46	Gray, "Electronically Steerable Yagi-Uda Microstrip Patch Antenna," IEEE Transactions on Antennas and Propagation, Vol. 46, No. 5, May 1998.	☐
	47	Greiser, J. W. and Brown, G. S., "A 500:1 Scale Model of Warla – A Wide Aperture Radio Location Array," presented at The Thirteenth Symposium on the USAF Antenna Research and Development Program on October 14-18, 1963 at the University of Illinois Antenna Laboratory in Urbana, Illinois.	☐
	48	Guo, Y.X. et al., "Double U-slot rectangular patch antenna," Electronics Letters, vol. 34, no. 19, pp. 1805-1806 (Sept. 17, 1998).	☐
	49	Gupta, K.C., "Broadbanding Techniques for Microstrip Patch Antennas – A Review," Antenna Applications Symposium, September 21-23, 1988.	☐
	50	Gupta, Microstrip Antenna Design, Norwood, MA, Artech House 1988.	☐

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EXAMINER SIGNATURE

Examiner Signature		Date Considered	

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U.S.PATENTS

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	1	4038662		1977-07-26	TURNER	
	2	4571595		1986-02-18	PHILLIPS	
	3	5898404		1999-04-27	JOU	
	4	5966098		1999-10-12	QI	
	5	6031505		2000-02-29	QI	
	6	6104349		2000-08-15	COHEN	
	7	6452556		2002-09-17	HA	
	8	6459413		2002-10-01	TSENG	

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	9	6476769		2002-11-05	LEHTOLA	
	10	6549789		2003-04-15	KFOURY	
	11	6693604		2004-02-17	WASHIRO	
	12	6697022		2004-02-24	PONCE DE LEON	
	13	6831606		2004-12-14	SAJADINIA	
	14	6839040		2005-01-04	HUBER	
	15	6853352		2005-02-08	NEVERMANN	
	16	7148850		2006-12-12	PUENTE BALIARDA	

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20010050636		2001-12-13	WEINBERGER	

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	Attorney Docket Number	47005-P018WUSC1

	2	20040090372		2004-05-13	DI NALLO	

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FOREIGN PATENT DOCUMENTS

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	1	2142280	ES		2000-11-26	BALIARDA		☐
	2	03156847	JP		1993-01-14	YASUSHIRO		☐
	3	96297755	WO		1996-09-26	PRUDHOMME		☐
	4	9706578	WO		1997-02-20	COHEN		☐

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NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	Ali, M. et al., "A Triple-Band Internal Antenna for Mobile Hand-held Terminals," IEEE, 2002.	☐
	2	Deng, A T-Strip Loaded Rectangular Microstrip Patch Antenna for Dual-Frequency Operation IEEE Antennas and Propagation Society International Symposium, Aug. 1999, vol. 2, pp. 940-43.	☐

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	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

	3	Hagstrom, P., "Novel Ceramic Antenna Filters for GSM/DECT and GSM/PCN Network Terminals," The 8th IEEE International Symposium on Personal, Indoor, and Mobile Radio Communications, Volume 3, September 1-4, 1997.	☐
	4	Halloran, T.W. et al. "A Dual Channel VHF Telemetry Antenna System for Re- Entry Vehicle Applications," The Eleventh Symposium on The USAF Antenna Research and Development Program, October 16 – 20, 1961.	☐
	5	Hikata, M., Shibagaki, N., Asai, K., Sakiyama, K. and Sumioka, A., "New Miniature SAW Antenna Duplexer Used in GHz-Band Digital Mobile Cellular Radios," 1995 IEEE Ultrasonics Symposium, 1, November 7-10, 1995.	☐
	6	Hikita, M., Ishida, Y., Tabuchi, T. and Kurosawa, K., "Miniature SAW Antenna Duplexer for 800-MHz Portable Telephone Used in Cellular Radio Systems," IEEE Transactions on Microwave Theory and Techniques, 36, 6, June 1988.	☐
	7	Hill, J.E. et al., "An Integrated Strip-Transmission-Line Antenna System for JBand," The Twenty-Third Symposium on The USAF Antenna Research and Development Program, October 10 – 12, 1973.	☐
	8	Hofer, D.A., Kesler, O.B., and Loyet, L.L., "A Compact Multi-Polarized Broadband Antenna," Proceedings of the 1989 Antenna Applications Symposium, September 20-22, 1989.	☐
	9	Holtum, A. G., "A Dual Frequency Dual Polarized Microwave Antenna," The Sixteenth Symposium on The USAF Antenna Research and Development Program, October 11 – 13, 1966.	☐
	10	Holzschuh, D.L., "Hardened Antennas for Atlas and Titan Missile Site Communications," The Thirteenth Symposium on The USAF Antenna Research and Development Program, October 14 – 18, 1963.	☐
	11	Hong, "Compact microwave elliptic function filter using novel microstrip meander open-loop resonators" (March 14, 1996).	☐
	12	Hong and Lancaster, "Recent Advances in Microstrip Filters for Communications and Other Applications, IEEE, pp. 2/1-2/6 (1997).	☐
	13	Huynh, T. and Lee, K.F., "Single-layer single-patch wideband microstrip antenna," Electronics Letters, 31, 16, August 3, 1995.	☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

	14	Hyneman, R.F., et al., "Homing Antennas for Aircraft (450-2500 MC)," The Fifth Symposium on The USAF Antenna Research and Development Program, October 16 – 20, 1955.	☐
	15	IEEE, IEEE Standard Definitions of Terms for Antennas, IEEE Std. 145-1983, New York, IEEE, 1983.	☐
	16	Ikata, O., Satoh, Y., Uchishiba, H., Taniguchi, H., Hirasawa, N., Hashimoto, K. and Ohmori, H., "Development of Small Antenna Duplexer Using SAW Filters for Handheld Phones," 1993 IEEE Ultrasonics Symposium, 1, October 31-November 3, 1993.	☐
	17	Ingerson, Paul G. and Mayes, Paul E., "Asymmetrical Feeders for Log-Periodic Antennas," The Seventeenth Symposium On The USAF Antenna Research and Development Program (November 14-17, 1967).	☐
	18	Isbell, D.E., "Non-Planar Logarithmically Periodic Antenna Structures," Seventh Annual Symposium on USAF Antenna Research and Development Program, October 21-25, 1957.	☐
	19	Isbell, D.E., "Multiple Terminal Log-Periodic Antennas," Eighth Annual Symposium on The USAF Antenna Research and Development Program, October 20–24, 1958.	☐
	20	Ishikawa, Y., Hattori, J., Andoh, M. and Nishikawa, T., "800 MHz High Power Bandpass Filter Using TM Dual Mode Dielectric Resonators," 21st European Microwave Conference, Volume 2, September 9-12, 1991.	☐
	21	James and Hall, "Handbook of Microstrip Antennas", vol. 1, 1989.	☐
	22	Jones, Howard S., "Conformal and Small Antenna Designs," Proceedings of the 1981 Antenna Applications Symposium, August 1981.	☐
	23	Kraus, John D., Antennas, Second Edition, New York, McGraw-Hill Book Company, 1988	☐
	24	Kuhlman, E.A., "A Directional Flush Mounted UHF Communications Antenna for High Performance Jet Aircraft for the 225-400 MC Frequency Range," The Fifth Symposium on The USAF Antenna Research and Development Program, October 16 – 20, 1955.	☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Attorney Docket Number	47005-P018WUSC1

	25	Kumar, G. and Gupta, K., "Directly Coupled Multiple Resonator Wide-Band Microstrip Antennas," IEEE Transactions on Antennas and Propagation, AP-29, 1, June 1985, pp. 588-593.	☐
	26	Kumar, "Nonradiating Edges and Four Edges Gap-Coupled Multiple Resonator Broad-Band Microstrip Antenna," IEEE Transactions on Antenna and Propagation, Feb. 1985.	☐
	27	Kuo, Sam, "Frequency-Independent Log-Periodic Antenna Arrays With Increased Directivity and Gain," Twenty-First Annual Symposium on USAF Antenna Research and Development, October 12-14, 1971.	☐
	28	Kurpis, G. P., The New IEEE Standard Dictionary of Electrical and Electronics Terms, Fifth Edition, New York, IEEE, 1993.	☐
	29	Kutter, "Fractal Antenna Design" (Honors Thesis, University of Dayton, 1996).	☐
	30	Lancaster, et al., "Miniature Superconducting Filters" IEEE Transactions on Microwave Theory and Techniques (July 1996).	☐
	31	Larson, III, J. D., Ruby, R., Bradley, P. and Oshmyansky, Y., "A BAW Antenna Duplexer for the 1900 MHz PCS Band," 1999 IEEE Ultrasonics Symposium, 2, October 17-20, 1999.	☐
	32	Lee, J.C., "Analysis of Differential Line Length Diplexers and Long-Stub Filters," The Twenty-First Symposium on The USAF Antenna Research and Development Program, October 12 – 14, 1971.	☐
	33	Liu, "Dual-Frequency Planar Inverted-F Antenna," IEEE Transactions on Antennas and Propagation, Vol. 45, No. 10, October 1997.	☐
	34	D. Liu, "A Multi-branch monopole antenna for dual-band cellular applications," IEEE Antennas and Propagation society international symposium and URSI Radio science Meeting proceedings, vol.3, pp.1578- 1581, July 11-16,1999, USA.	☐
	35	Lo, Y. T., et al. "Theory and Experiment on Microstrip Antennas," 1978 Antenna Applications Symposium, September 20 – 22, 1978.	☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Attorney Docket Number	47005-P018WUSC1

	36	Locus, Stanley S., "Antenna Design for High Performance Missile Environment," The Fifth Symposium on The USAF Antenna Research and Development Program, October 16 – 20, 1955.	☐
	37	Lu, Jui-Han & Wong, Kin-Lu, "Dual-Frequency Rectangular Microstrip Antenna with Embedded Spur Lines and Integrated Reactive Loading," Microwave & Optical Tech. Letters, 21, 4, May 20, 1999.	☐
	38	Lu and Wong, "Slot-loaded, meandered rectangular microstrip antenna with compact dual-frequency operation," Electronics Letters, Vol. 34, No. 11, May 28, 1998.	☐
	39	Lu and Wong, "Single-feed dual-frequency equilateral-triangular microstrip antenna with pair of spur lines," Electronics Letters, Vol. 34, No. 12, June 11, 1998.	☐
	40	Lu, "Single-Feed Dual-Frequency Rectangular Microstrip Antenna," IEEE Antennas and Propagation Society International Symposium, 2000, vol. 4, pp. 2192-95.	☐
	41	Lu et al., "Novel Dual-Frequency and Broad-Band Designs of Slot-Loaded Equilateral Triangular Microstrip Antennas," Microwave and Optical Technology Letters, Vol. 48, No. 7 (July, 2000, received July 27, 1998).	☐
	42	Maci, S. and Gentili, G. B., "Dual-Frequency Patch Antennas," IEEE Antennas and Propagation Magazine, 39, 6, December 1997.	☐
	43	Maci et al., "Dual-band Slot-loaded patch antenna", IEE Proc.-Microw. Antennas Propag., Vol. 142, No. 3, pp. 225-232 (June 1995).	☐
	44	Manteuffel, D. et al., Design Considerations for Integrated Mobile Phone Antennas, 11th Int'l Conference on Antennas & Propagation, Conference Publication No. 480, pp. 252–256 (April 17-20, 2001).	☐
	45	Martin, W.R., "Flush VOR Antenna for C-121C Aircraft," The Second Symposium on the USAF Antenna Research and Development Program, October 19-23, 1952.	☐
	46	Martin, R.W., et al. "An Unfurlable, High-Gain Log- Periodic Antenna for Space Use" The Seventeenth Symposium on The USAF Antenna Research and Development Program, November 14 – 17, 1967.	☐

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	47	May, "Aerial Magic," New Scientist, pp. 28-30 (January 31, 1998).	☐
	48	Mayes, P.E., et al. "Multi-Arm Logarithmic Spiral Antennas," The Tenth Symposium on The USAF Antenna Research and Development Program, October 3 – 7, 1960.	☐
	49	Mayes, P.E., et al. "High Gain Log-Periodic Antennas," The Tenth Symposium on The USAF Antenna Research and Development Program, October 3 – 7, 1960.	☐
	50	Mayes, P., et al. "Some Broadband, Low-Profile Antennas," 1985 Antenna Applications Symposium, September 18 – 20, 1985.	☐

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	1	McSpadden, J. O., Lu, Fan and Chang, Kai, "Design and Experiments of a High-Conversion-Efficiency 5.8-GHz Rectenna," IEEE Transactions on Microwave Theory and Techniques, 46, 12, part 1, December 1998.	☐
	2	Misra and Chowdhury, "Study of Impedance and Radiation Properties of a Concentric Microstrip Triangular-Ring Antenna and Its Modeling Techniques Using FDTD Method," IEEE Transactions on Antennas and Propagation, Vol. 46, No. 4, April 1998.	☐
	3	Misra, Ita et al., "Experimental Investigations on the Impedance and Radiation Properties of a Three-Element Concentric Microstrip Antenna," Microwave and Optical Technology Letters, Vol. 11, No. 2, February 5, 1996.	☐
	4	Moheb, H., Robinson, C. and Kijesky, J., "Design & Development of Co-Polarized Ku-Band Ground Terminal System for Very Small Aperture Terminal (VSAT) Application," IEEE International Symposium on Antennas and Propagation Digest, 3, July 11-16, 1999.	☐
	5	Munson, R. et al. "Conformal Microstrip Array for a Parabolic Dish," The Twenty- Third Symposium on The USAF Antenna Research and Development Program, October 10 – 12, 1973.	☐
	6	Munson, R., "Microstrip Phased Array Antennas," The Twenty-Second Symposium on The USAF Antenna Research and Development Program, October 11 – 13, 1972.	☐
	7	Munson, R. E., "Conformal Microstrip Antennas and Microstrip Phased Arrays," IEEE Trans. Antennas Propagat., vol. Ap-22, p. 74, January 1974.	☐
	8	Mushiake, Yasuto, Self-Complementary Antennas: Principle of Self- Complementarity for Constant Impedance, London, Springer-Verlag London Limited, 1996.	☐
	9	Nadan, T. Le, Coupez, J. P., Toutain, S. and Person, C., "Integration of an Antenna/Filter Device, Using a Multi-Layer, Multi-Technology Process," 28th European Microwave Conference, Volume 1, October 1998.	☐
	10	Nagai, Kiyoshi, Mikuni, Yoshihiko and Iwasaki, Hisao, "A Mobile Radio Antenna System Having a Self-Diplexing Function," IEEE Transactions on Vehicular Technology, 28, 4, November 1979.	☐
	11	Nakano and Vichien, "Dual-Frequency Square Patch Antenna with Rectangular Notch," Electronics Letters, Vol. 25 No. 16, August 3, 1989.	☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	12	Nishikawa, T., Ishikawa, Y., Hattori, J. and Wakino, K. "Dielectric Receiving Filter with Sharp Stopband Using an Active Feedback Resonator Method for Cellular Base Stations," IEEE Transactions on Microwave Theory and Techniques, 37, 12, December 1989.	☐
	13	Photos of Nokia 3210 product (1999 or earlier)	☐
	14	Photos of Nokia 8210 product (1999 or earlier)	☐
	15	Photos of Nokia 8260 product (1999 or earlier)	☐
	16	Photos of Nokia 8265 product (1999 or earlier)	☐
	17	Photos of Nokia 8810 product (1998 or earlier)	☐
	18	Photos of Nokia 8850 product (1999 or earlier)	☐
	19	Photos of Nokia 8860 product (1999 or earlier)	☐
	20	Omar et al., "A New Broad-band Dual-Frequency Coplanar Waveguide Fed Slot- Antenna," IEEE, 1999.	☐
	21	Ou, J. D. et al., "An Analysis of Annular, Annular Sector, and Circular Sector Microstrip Antennas," 1981 Antenna Applications Symposium, September 23 – 25, 1981.	☐
	22	Pan, S. and Hsu, W., "Single-Feed Dual-Frequency Microstrip Antenna with Two Patches," IEEE, 1999.	☐

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	23	Paschen, D.A. & Mayes, P.E., "Structural Stropband Elimination with the Monopole-Slot Antenna," 1982 Antenna Applications Symposium, September 22 – 24, 1982.	☐
	24	Paschen, D.A., "Broadband Microstrip Matching Techniques," 1983 Antenna Applications Symposium, September 21 – 23, 1983.	☐
	25	Phelan, H.R., "A Wide-Band Parallel-Connected Balun," The Eighteenth Symposium on The USAF Antenna Research and Development Program, October 15 – 17, 1968.	☐
	26	Pozar, David M., Microwave Engineering, Reading, MA, Addison-Wesley, 1990.	☐
	27	Pribetich, "QuasiFractal Planar Microstrip Resonators for Microwave Circuits," Microwave and Optical Technology Letters, Vol. 21, No. 6 (June 20, 1999).	☐
	28	Puente, C., Romeu, J., Pous, R., Garcia, X. and Benitez, F., "Fractal Multiband Antenna Based on the Sierpinski Gasket," Electronics Letters, 32, 1, January 4, 1996.	☐
	29	Puente, C., Romeu, J., Bartoleme, R. and Pous, R., "Perturbation of the Sierpinski Antenna to Allocate Operating Bands," Electronics Letters, 32, 24, November 21, 1996.	☐
	30	Puente-Baliarda, "On the Behavior of the Sierpinski Multiband Fractal Antenna," IEEE Transactions on Antennas and Propagation, Vol. 46, No. 4 (April 1998).	☐
	31	Rensh, "Broadband Microstrip Antenna," Proceedings of the Moscow International Conference on Antenna Theory and Tech. 1998, Vol. 28, pp. 420-423 (Sept. 22, 1998).	☐
	32	Photos of RIM 857 product (at least as early as 2000) and SAR report from FCC	☐
	33	Photos of RIM 957 product (at least as early as 2000)	☐

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	34	Rockwell B-1B Lancer <http://home.att.net/~jbaugher2/newb1_2.html> (last visited February 17, 2010).	☐
	35	Rosa, J. et al., "A Wide Angle Circularly Polarized Omnidirectional Array Antenna," The Eighteenth Symposium on The USAF Antenna Research and Development Program, October 15 – 17, 1968.	☐
	36	Rotman, W., "Problems Encountered in the Design of Flush-Mounted Antennas For High Speed Aircraft," The Second Symposium on the USAF Antenna Research and Development Program, October 19-23, 1952.	☐
	37	Rowell and Murch, "A Compact PIFA Suitable for Dual-Frequency 900/1800-MHz Operation," IEEE Transactions on Antennas and Propagation, Vol. 46, No. 4, April 1998.	☐
	38	Rowell, "A Capacitating Loaded PIFA for Compact Mobile Telephone Handsets," IEEE Transactions on Antennas and Propagation, 45, 5, May 1997.	☐
	39	Rudge, A. W., Milne, K., Olver, A. D. and Knight P., (eds.), The Handbook of Antenna Design, Volumes 1 and 2, London, Peter Peregrinus Ltd., 1986.	☐
	40	Rumsey, Victory H., Frequency Independent Antennas, New York, Academic Press, 1966. Stang, Abstracts of the 12th Annual Symposium (Oct.16–19, 1962).	☐
	41	Sanchez-Hernandez, D. & Robertson, I. D., "Analysis and Design of a Dual-Band Circularly Polarized Microstrip Patch Antenna," IEEE Transactions on Antennas and Propagation, 43, 2, February 1995. The Glen L. Martin Company, "Antennas for USAF B-57 Series Bombers" The Second Symposium on the USAF Antenna Research and Development Program, October 19-23, 1952.	☐
	42	Sandlin, B.S., Terzuoli, A.J., "A Genetic Antenna Design for Improved Radiation Over Earth," Program for 1997 Antenna Applications Symposium (Allerton Conference Proceedings), September 17-18, 1997.	☐
	43	Saunders, Simon R., Antennas and Propagation for Wireless Communication Systems, Chichester, John Wiley & Sons, Ltd., 1999.	☐
	44	Scharfman, W., et al. "Telemetry Antennas for High-Altitude Missiles," The Eighth Symposium on The USAF Antenna Research and Development Program, October 20 – 24, 1958.	☐

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	45	Schaubert, Chang and Wunsch, "Measurement of Phased Array Performance at Arbitrary Scan Angles," presented at the 1994 Antenna Applications Symposium on September 21, 1994.	☐
	46	Seavy, J. et al., "C-Band Paste-On and Floating Ring Reflector Antennas," The Twenty-Third Symposium on The USAF Antenna Research and Development Program, October 10 – 12, 1973.	☐
	47	Shenoy, A., Chalmers, H., Carpenter, E., Bonetti, R. and Wong, A., "Notebook Satcom Terminal Technology Development," Tenth International Conference on Digital Satellite Communications, May 15-19, 1995.	☐
	48	Shibagaki, N. Sakiyama, K. and Hikita, M., "SAW Antenna Duplexer Module Using SAW-Resonator-Coupled Filter for PCN System," 1998 IEEE Ultrasonics Symposium, 1, October 5-8, 1998.	☐
	49	Shibagaki, N., Sakiyama, K. and Hikita, M. "Miniature SAW Antenna Duplexer Module for 1.9 GHz PCN Systems Using SAW-Resonator-Coupled Filters," 1998 IEEE Ultrasonics Symposium, 2, June 7-12, 1998.	☐
	50	Shimoda, R.Y., "A Variable Impedance Ratio Printed Circuit Balun," 1979 Antenna Applications Symposium, September 26 – 18, 1979.	☐

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EXAMINER SIGNATURE

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jaume Anguera Pros et al.

Application No.: 12/228,487 Confirmation No.: 6222

Filed: August 13, 2008 Art Unit: 2821

For: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES Examiner: Not Yet Assigned

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Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

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Dated: July 23, 2010

Respectfully submitted,

By_____
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U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	4827271		1989-05-02	BERNEKING, WILLIAM	
	2	4843468		1986-07-14	DREWERY JOHN	
	3	5410322		1995-04-25	SONODA	
	4	5918183		1999-06-29	JANKY, JAMES M	
	5	6140975		2000-10-31	COHEN, NATHAN	
	6	7148850		2006-12-12	PUENTE, CARLES	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	NA
	Attorney Docket Number	47005-P018WUSC1

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	1	0969375	EP	A2	2000-01-05	STOUTAMIRE DAVID		☐
	2	2112163	ES		1995-05-15	PUENTE, CARLES		☐
	3	97/06578	WO		1997-02-20	COHEN NATHAN		☐
	4	99/27608	WO		1999-06-03	COHEN NATHAN		☐
	5	01/31747	WO	A1	2001-05-03	PUENTE, CARLES		☐

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	Office Action for European patent application 00909089.5, February 07, 2003	☐

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	2	Response to Office Action dated on February 7, 2003 for European patent application 00909089.5; August 14, 2003	☐
	3	Summons to Attend Oral Proceedings for European patent 00909089.5, October 28, 2004	☐
	4	Written Submissions for European patent 00909089.5, December 12, 2004	☐
	5	Minutes of oral proceedings (including annexes) for European patent 00909089.5, January 28, 2005	☐
	6	Response to Office Action dated on November 5, 2004 for the Chinese patent application 00818542.5, March 31, 2005	☒
	7	Office Action for US patent application 7312762, October 5, 2006	☐
	8	Response to Office Action dated on December 27, 2006 for US patent application 7312762, January 4, 2007	☐
	9	ADDISON, Paul S. FRACTALS AND CHAOS : An Illustrated Course, Institute of Physics Publishing, Bristol and Philadelphia; IOP Publishing 1997, pp. 30, 31 & 33	☐
	10	BALANIS, Constantine A. Antenna Theory, John Wiley & Sons, Inc., 1982	☐
	11	BERIZZI, Fabrizio et al., Fractal Analysis of the Signal Scattered from the Sea Surface, IEEE Transactions on Antennas and Propagation, Vol. 47, No.2, Feb. 1999,pp. 324-338	☐
	12	BOSHOFF, Hendrik F'v. A Fast Box Counting Algorithm for Determining the Fractal Dimension of Sampled Continuous Functions, 1992 IEEE, pp. 43- 48	☐

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	13	CARVER, Keith R. et al., Microstrip Antenna Technology IEEE Transactions on Antennas and Propagation, Vol. AP-29, No.1, Jan. 1981, pp.2-23.	☐
	14	CHEN, Susan S. et al., On the Calculation of Fractal Features from Images. IEEE Transactions on Pattern Analysis and Machine Intelligence, Vol. 15, No. 10, Oct. 1993, pp. 1087-1090	☐
	15	FALCONER, Kenneth, FRACTAL GEOMETRY : Mathematical Foundations and Applications. 2nd edition, John Wiley & Sons. Ltd., 2003	☐
	16	FENG, Jie et al., Fractional Box-Counting Approach to Fractal Dimension Estimation, IEEE 1996; Proceedings of ICPR'96, pp. 854-858	☐
	17	GARG, Ramesh et al., Microstrip Antenna Design Handbook, 2001, Artech House, Inc,	☐
	18	HANSEN, RC Fundamental limitation in antennas, Proceedings of the IEEE, Feb. 1981	☐
	19	MUNSON, R. E. Microstrip Antennas in JOHNSON, Richard C. (Editor), Antenna Engineering Handbook, McGraw Hill Inc., 1993	☐
	20	KOBAYASHI, S. et al., Estimation of 3D Fractal Dimension of Real Electrical Tree Patterns. IEEE 1994; Proceedings of the 4th International Conference on Properties and Applications of Dielectric Materials, July 3-8, 1994, Brisbane, Australia, pp~ 359-362	☐
	21	KRAUS, John O. ANTENNAS, 1988, McGraw-Hili, Inc., preface and list of contents	☐
	22	NEARY DAVID: Fractal methods in Image Analysis and Coding, Thesis, Dublin City University - School of Electronic Engineering, Dublin 9, Ireland, September 20, 2000, (Internet: http://www.redbrick.dcu.ie/~bolsh/thesis/)	☐
	23	NG, Vincent et al., Diagnosis of Melanoma with Fractal Dimensions IEEE TENCON; 1993/ Beijing, pp. 514-517	☐

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	24	PEITGEN, Heinz-Otto et al., CHAOS AND FRACTALS - New Frontiers of Science ,1992, pp. 212-216, 387-388	☐
	25	PENN, Alan I. at al., Fractal Dimension of Low-Resolution Medical Images. 18th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Amsterdam 1996; 4.5.3: Image Pattern Analysis. pp.1163-1165	☐
	26	POZAR, David M. et al., Microstrip Antennas - The Analysis and Design of Microstrip Antennas and Arrays, 1995, Institute of Electrical and Electronic Engineers, Inc, page ix and 3	☐
	27	PUENTE, J. Anguera, J. Romeu, C. Borja, M. Navarro and J. Soler, Fractal-Shaped Antennas and their Application to GSM 900/1800, AP2000 Millenium Conference on Antennas and Propagation, Davos, Apr. 2000	☐
	28	ROUVIER, S. et al. Fractal Análisis of Bidimensional Profiles and Application to Electromagnetic Scattering from Soils. 1996 IEEE, pp. 2167-2169	☐
	29	RUSSELL D.A.; HANSON J.D.; OTT E.: Dimension of strange attractors. PHYSICAL REVIEW LETTERS vol. 45, no. 14, 06 October 1980, USA, pages 1175 - 1178	☐
	30	SARKAR, Nirupam et al., An Efficient Differential Box-Counting Approach to Compute Fractal Dimension of Image. IEEE Transactions on Systems, Man and Cybernetics, Vol. 24, No.1, Jan. 1994, pp. 115-120	☐
	31	SO P.; BARRETO E.B.; HUNT B.R.: Box-counting dimension without boxes: Computing D0 from average expansion rates, PHYSICAL REVIEW E vol. 60, no. 1, July 1999, USA, pages 378 - 385	☐
	32	Software to compute box-counting dimension (Internet: http://www.sewanee.edu/physics/PHYSICS123/BOX% 20COUNTING%20DIMENSION.html)	☐
	33	TANG, Y, et al., The Application of Fractal Analysis to Feature Extraction, IEEE, 1999, pp. 875-879	☐
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Dated: July 28, 2010 Signature: (Brenda I. Brown)

Docket No.: 47005-P018WUSC1
(PATENT)

OPAP JUL 28 2010 PATENT & TRADEMARK OFFICE IAP23

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jaume Anguera Pros et al.

Application No.: 12/228,487 Confirmation No.: 6222

Filed: August 13, 2008 Art Unit: 2821

For: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES Examiner: Not Yet Assigned

INFORMATION DISCLOSURE STATEMENT (IDS)

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Dated: July 28, 2010

Respectfully submitted,

By_____
Shoaib A. Mithani
Registration No.: 61,654
WINSTEAD PC
P.O. Box 50784
Dallas, Texas 75201
(214) 745-5400
Attorneys For Applicant

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

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	1	6831606	B2	2004-12-14	SAJADINIA	
	2	6741215	B2	2004-05-25	GRANT ET AL	

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	1	Teng , P. L. ; Wong , K. L. , Planar monopole folded into a compact structure for very-low-profile multiband mobile-phone antenna, Microwave and optical technology letters, April 05, 2002	☐
	2	Downunder Wireless LLC, Plaintiff, v. HTC Corp; LG Electronics; Motorola Inc.; Nokia Corp.; Pantech Wireless Inc.; Personal Communications Devices LLC; Sharp Electronics Corp; and Sony Ericsson Mobile Communications (USA) Inc., Defendants. Civil action no. 2:09-cv-206. Jury trial requested. Filed 06/29/2009	☐

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Application No.: 12/228,487 Confirmation No.: 6222

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	1	Antenna Installation on Super Constellation Airborne Early Warning and Control Aircraft, Allerton Conference, 1954	☐
	2	BLACKBAND, W. T., Coaxial Transmission Lines and Components, in A. W. Rudge, K. Milne, A. D. Olver, and P. Knight (eds.), The Handbook of Antenna Design, Volumes 1 and 2, London, Peter Peregrinus Ltd., 1986.	☐
	3	COUNTER, V. A., Flush, Re-entrant, Impedance Phased, Circularly Polarized Cavity Antenna for Missiles. The Second Symposium on the USAF Antenna Research and Development Program, October 19-23, 1952.	☐
	4	COUNTER and MARGERUM. Flush Dielectric Disc Antenna for Radar, AllertonConference, 1952	☐
	5	FCC Form 731 filed Apr. 1, 1999.	☐
	6	GSM Technical Specification and related materials, ETSI, 1996	☐
	7	Photos of Hagenuk Global Handy (at least as early as 1996)	☐
	8	Photos of Motorola Advisor Elite (1997)	☐
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	10	Photos of Motorola Bravo Plus (1995)	☐
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	12	Photos of Motorola Page Writer 2000x (1997)	☐
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OPAP 1600 JUL 28 2010 PATENT & TRADEMARK OFFICE

Docket No.: 47005-P018WUSC1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jaume Anguera Pros et al.

Application No.: 12/228,487 Confirmation No.: 6222

Filed: August 13, 2008 Art Unit: 2821

For: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES Examiner: Not Yet Assigned

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Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed before the mailing date of a first Office Action on the merits, as far as is known to the undersigned (37 CFR 1.97(b)(3)).

Applicant has not submitted copies of each cited U.S. patent and U.S. patent application in accordance with 37 CFR 1.98(a)(2). Applicant submits herewith copies of any cited non-patent documents and foreign patent documents in accordance with 37 CFR 1.98(a)(2).

In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information

as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing of this Information Disclosure Statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 23-2426, under Order No. 47005-P018WUSC1.

Dated: July 28, 2010

Respectfully submitted,

By _____
Shoaib A. Mithani
Registration No.: 61,654
WINSTEAD PC
P.O. Box 50784
Dallas, Texas 75201
(214) 745-5400
Attorneys For Applicant

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/228,487	08/13/2008	Jaume Anguera Pros	47005-P018WUSC1	6222

61060 7590 08/26/2010

WINSTEAD PC
P.O. BOX 50784
DALLAS, TX 75201

EXAMINER	
NGUYEN, HOANG V	
ART UNIT	PAPER NUMBER
2821	

MAIL DATE	DELIVERY MODE
08/26/2010	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)	
	12/228,487	PROS 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 *13 August 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) *1-15* 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) *1-15* 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 *13 August 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 *7/28/10; 7/28/10; 7/28/10; 7/23/10; 4/30/10; 1/4/10; 9/22/09; 6/2/09; 12/29/08; 12/12/08*
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Double Patenting

1. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

2. Claims 1-15 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-15 of prior U.S. Patent No. 7,423,592. This is a double patenting rejection.

Inquiry

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

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12228487	PROS ET AL.
	Examiner	Art Unit
	HOANG V NGUYEN	2821

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	08/23/2010								
	1	✓								
	2	✓								
	3	✓								
	4	✓								
	5	✓								
	6	✓								
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	10	✓								
	11	✓								
	12	✓								
	13	✓								
	14	✓								
	15	✓								

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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JUL 28 2010
PATENT AND TRADEMARK OFFICE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	12228487
Filing Date	2008-08-13
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	Not Yet Assigned
Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐

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NON-PATENT LITERATURE DOCUMENTS

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Art Unit	2821
Examiner Name	Not Yet Assigned
Attorney Docket Number	47005-P018WUSC1

	1	Antenna Installation on Super Constellation Airborne Early Warning and Control Aircraft, Allerton Conference, 1954	☐
	2	BLACKBAND, W. T., Coaxial Transmission Lines and Components, in A. W. Rudge, K. Milne, A. D. Olver, and P. Knight (eds.), The Handbook of Antenna Design, Volumes 1 and 2, London, Peter Peregrinus Ltd., 1986.	☐
	3	COUNTER, V. A., Flush, Re-entrant, Impedance Phased, Circularly Polarized Cavity Antenna for Missiles. The Second Symposium on the USAF Antenna Research and Development Program, October 19-23, 1952.	☐
	4	COUNTER and MARGERUM. Flush Dielectric Disc Antenna for Radar, AllertonConference, 1952	☐
	5	FCC Form 731 filed Apr. 1, 1999.	☐
	6	GSM Technical Specification and related materials, ETSI, 1996	☐
	7	Photos of Hagenuk Global Handy (at least as early as 1996)	☐
	8	Photos of Motorola Advisor Elite (1997)	☐
	9	Photos of Motorola Advisor Gold (1996)	☐
	10	Photos of Motorola Bravo Plus (1995)	☐
	11	Photos of Motorola P935 product (1997)	☐

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

USPTO IAP6 JUL 28 2010 PATENT & TRADEMARK OFFICE

	12	Photos of Motorola Page Writer 2000x (1997)	☐
	13	Photos of Nokia 3360 (1999 or earlier)	☐
	14	Photos of RIM950 product (at least as early as 1998)	☐

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EXAMINER SIGNATURE

Examiner Signature	/Hoang Nguyen/	Date Considered	08/23/2010

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	614305	antenna	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/23 13:51
L2	3499037	substrate or dielectric	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/23 13:51
L3	7341	space adj filling	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/23 13:51
L4	220	1 and 2 and 3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/23 13:52
L5	495987	spiral or meander$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/23 13:52
L6	2647812	portable or $4phone or mobile	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/23 13:52

L7	3137997	(opposite or rear or back) near3 (side or surface)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/23 13:53
L8	39	4 and 5 and 6 and 7	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/23 13:53

8/23/2010 1:54:08 PM
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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

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Filing Date	2008-08-13
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	NA
Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	4827271		1989-05-02	BERNEKING, WILLIAM	
	2	4843468		1986-07-14	DREWERY JOHN	
	3	5410322		1995-04-25	SONODA	
	4	5918183		1999-06-29	JANKY, JAMES M	
	5	6140975		2000-10-31	COHEN, NATHAN	
	6	7148850		2006-12-12	PUENTE, CARLES	

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear

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	1					

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FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	0969375	EP	A2	2000-01-05	STOUTAMIRE DAVID		☐
	2	2112163	ES		1995-05-15	PUENTE, CARLES		☐
	3	97/06578	WO		1997-02-20	COHEN NATHAN		☐
	4	99/27608	WO		1999-06-03	COHEN NATHAN		☐
	5	01/31747	WO	A1	2001-05-03	PUENTE, CARLES		☐

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	1	Office Action for European patent application 00909089.5, February 07, 2003	☐

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	2	Response to Office Action dated on February 7, 2003 for European patent application 00909089.5; August 14, 2003	☐
	3	Summons to Attend Oral Proceedings for European patent 00909089.5, October 28, 2004	☐
	4	Written Submissions for European patent 00909089.5, December 12, 2004	☐
	5	Minutes of oral proceedings (including annexes) for European patent 00909089.5, January 28, 2005	☐
	6	Response to Office Action dated on November 5, 2004 for the Chinese patent application 00818542.5, March 31, 2005	☒
	7	Office Action for US patent application 7312762, October 5, 2006	☐
	8	Response to Office Action dated on December 27, 2006 for US patent application 7312762, January 4, 2007	☐
	9	ADDISON, Paul S. FRACTALS AND CHAOS : An Illustrated Course, Institute of Physics Publishing, Bristol and Philadelphia; IOP Publishing 1997, pp. 30, 31 & 33	☐
	10	BALANIS, Constantine A. Antenna Theory, John Wiley & Sons, Inc., 1982	☐
	11	BERIZZI, Fabrizio et al., Fractal Analysis of the Signal Scattered from the Sea Surface, IEEE Transactions on Antennas and Propagation, Vol. 47, No.2, Feb. 1999,pp. 324-338	☐
	12	BOSHOFF, Hendrik F'v. A Fast Box Counting Algorithm for Determining the Fractal Dimension of Sampled Continuous Functions, 1992 IEEE, pp. 43- 48	☐

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	13	CARVER, Keith R. et al., Microstrip Antenna Technology IEEE Transactions on Antennas and Propagation, Vol. AP-29, No.1, Jan. 1981, pp.2-23.	☐
	14	CHEN, Susan S. et al., On the Calculation of Fractal Features from Images. IEEE Transactions on Pattern Analysis and Machine Intelligence, Vol. 15, No. 10, Oct. 1993, pp. 1087-1090	☐
	15	FALCONER, Kenneth, FRACTAL GEOMETRY : Mathematical Foundations and Applications. 2nd edition, John Wiley & Sons. Ltd., 2003	☐
	16	FENG, Jie et al., Fractional Box-Counting Approach to Fractal Dimension Estimation, IEEE 1996; Proceedings of ICPR'96, pp. 854-858	☐
	17	GARG, Ramesh et al., Microstrip Antenna Design Handbook, 2001, Artech House, Inc,	☐
	18	HANSEN, RC Fundamental limitation in antennas, Proceedings of the IEEE, Feb. 1981	☐
	19	MUNSON, R. E. Microstrip Antennas in JOHNSON, Richard C. (Editor), Antenna Engineering Handbook, McGraw Hill Inc., 1993	☐
	20	KOBAYASHI, S. et al., Estimation of 3D Fractal Dimension of Real Electrical Tree Patterns. IEEE 1994; Proceedings of the 4th International Conference on Properties and Applications of Dielectric Materials, July 3-8, 1994, Brisbane, Australia, pp~ 359-362	☐
	21	KRAUS, John O. ANTENNAS, 1988, McGraw-Hili, Inc., preface and list of contents	☐
	22	NEARY DAVID: Fractal methods in Image Analysis and Coding, Thesis, Dublin City University - School of Electronic Engineering, Dublin 9, Ireland, September 20, 2000, (Internet: http://www.redbrick.dcu.ie/~bolsh/thesis/)	☐
	23	NG, Vincent et al., Diagnosis of Melanoma with Fractal Dimensions IEEE TENCON; 1993/ Beijing, pp. 514-517	☐

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	24	PEITGEN, Heinz-Otto et al., CHAOS AND FRACTALS - New Frontiers of Science ,1992, pp. 212-216, 387-388	☐
	25	PENN, Alan I. at al., Fractal Dimension of Low-Resolution Medical Images. 18th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Amsterdam 1996; 4.5.3: Image Pattern Analysis. pp.1163-1165	☐
	26	POZAR, David M. et al., Microstrip Antennas - The Analysis and Design of Microstrip Antennas and Arrays, 1995, Institute of Electrical and Electronic Engineers, Inc, page ix and 3	☐
	27	PUENTE, J. Anguera, J. Romeu, C. Borja, M. Navarro and J. Soler, Fractal-Shaped Antennas and their Application to GSM 900/1800, AP2000 Millenium Conference on Antennas and Propagation, Davos, Apr. 2000	☐
	28	ROUVIER, S. et al. Fractal Análisis of Bidimensional Profiles and Application to Electromagnetic Scattering from Soils. 1996 IEEE, pp. 2167-2169	☐
	29	RUSSELL D.A.; HANSON J.D.; OTT E.: Dimension of strange attractors. PHYSICAL REVIEW LETTERS vol. 45, no. 14, 06 October 1980, USA, pages 1175 - 1178	☐
	30	SARKAR, Nirupam et al., An Efficient Differential Box-Counting Approach to Compute Fractal Dimension of Image. IEEE Transactions on Systems, Man and Cybernetics, Vol. 24, No.1, Jan. 1994, pp. 115-120	☐
	31	SO P.; BARRETO E.B.; HUNT B.R.: Box-counting dimension without boxes: Computing D0 from average expansion rates, PHYSICAL REVIEW E vol. 60, no. 1, July 1999, USA, pages 378 - 385	☐
	32	Software to compute box-counting dimension (Internet: http://www.sewanee.edu/physics/PHYSICS123/BOX%20COUNTING%20DIMENSION.html) No date available.	☐
	33	TANG, Y, et al., The Application of Fractal Analysis to Feature Extraction, IEEE, 1999, pp. 875-879	☐
If you wish to add additional non-patent literature document citation information please click the Add button			

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EXAMINER SIGNATURE			
Examiner Signature	/Hoang Nguyen/	Date Considered	08/23/2010

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(Based on PTO 08-08 version)

Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 8

Complete if Known	
Application Number	12/228,487-Conf. #6222
Filing Date	August 13, 2008
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	Not Yet Assigned
Attorney Docket Number	47005-P018WUSC1

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AA*	US-5,929,825	07-27-1999	Niu et al.	
	AB*	US-6,166,694	12-26-2000	Ying et al.	
	AC*	US-6,111,545	08-29-2000	Saari et al.	
	AD*	US-6,112,102	08-29-2000	Zhinong et al.	
	AE*	US-6,329,962-A1	12-11-2001	Ying et al.	
	AF*	US-20010002823-A1	06-07-2001	YING	
	AG*	US-20020080088-A1	06-27-2002	Boyle	
	AH*	US-20020175866-A1	11-28-2002	Gram	
	AI*	US-6,104,349	08-15-2000	Cohen	
	AJ*	US-6,307,511	10-23-2001	Ying et al.	
	AK*	US-20020000940-A1	01-03-2002	MOREN et al.	
	AL*	US-6,337,663	01-08-2002	Chi-Ming et al.	
	AM*	US-6,664,930-A1	12-16-2003	Wen et al.	
	AN*	US-5,870,066	02-09-1999	Asakura et al.	
	AO*	US-5,963,871	10-05-1999	Zhinong et al.	
	AP*	US-20020190904-A1	12-19-2002	Cohen	
	AQ*	US-20040027295-A1	01-04-2005	Huber et al.	
	AR*	US-20040095289-A1	05-24-2005	Bae et al.	
	AS*	US-6,445,352	09-03-2002	Cohen	
	AT*	US-20020044090-A1	04-18-2002	Bahr et al.	
	AU*	US-6,130,651	10-10-2000	Yanagisawa et al.	
	AV*	US-6,459,413-A1	10-01-2002	Tseng et al.	
	AW*	US-6,864,854-A1	03-08-2005	Dai et al.	
	AX*	US-4,123,756	10-31-1978	Nagata et al.	
	AY*	US-4,389,651	06-21-1983	Tomasky	
	AZ*	US-5,337,065	08-09-1994	Bonnet et al.	
	AA1*	US-5,572,223	11-05-1996	Phillips et al.	
	AB1*	US-5,943,020	08-24-1999	Liebendoerfer et al.	
	AC1*	US-6,271,794	08-07-2001	Geeraert et al.	
	AD1*	US-6,384,790-A1	05-07-2002	Dishart et al.	
	AE1*	US-6,822,611-A1	11-23-2004	Kontogeorgakis et al.	
	AF1*	US-6,337,667	01-08-2002	Ayala et al.	
	AG1*	US-20010050637-A1	12-13-2001	Aoyama et al.	
	AH1*	US-20030210187-A1	06-08-2004	Wong et al.	
	AI1*	US-20070046548	03-01-2007	Pros et al.	
	AJ1*	US-20070152894	07-05-2007	Sanz et al.	
	AK1*	US-6,950,071	09-27-2005	Wen	
	AL1*	US-20040140938	07-22-2004	Kadambi	
	AM1	US-120020149527	10-17-2002	Wen	
	AN1*	US-20040004574	01-08-2004	Wen	
	AO1*	US-7,057,560	06-06-2006	Erkocevic	
	AP1*	US-20040212545	10-28-2004	Li	
	AQ1*	US-7,126,537	10-24-2006	Cohen	
	AR1*	US-4,578,654	03-25-1986	Tait	
	AS1*	US-5,608,417	03-04-1997	de Vall	
	AT1*	US-5,990,849	11-23-1999	Salvail et al.	
	AU1*	US-7,289,072-B2	10-30-2007	Sakurai, Masanori	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

ALTERNATIVE TO PTO/SB/08A/B
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Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	12/228,487-Conf. #6222
				Filing Date	August 13, 2008
				First Named Inventor	Jaume Anguera Pros
(Use as many sheets as necessary)				Art Unit	2821
				Examiner Name	Not Yet Assigned
Sheet	2	of	8	Attorney Docket Number	47005-P018WUSC1

	AV1*	US-6,882,320-B2	04-19-2005	Park et al.	
	AW1*	US-7,081,857-B2	07-25-2006	Kinnunen et al.	
	AX1*	US-2007/0103371-A1	05-10-2007	Kim et al.	
	AY1*	US-2007/0152887	07-05-2007	Castany et al.	
	AZ1*	US-2006/0028380	02-09-2006	Harano, Nobuya	
	AA2*	US-2007/0024508	02-01-2007	Lee, Hyok	
	AB2*	US-2003/0137459	07-24-2003	Kim et al.	
	AC2*	US-2007/0194997	08-23-2007	Nakanishi et al.	
	AD2*	US-2006/0033668	02-16-2006	Ryu	
	AE2*	US-2006/0170610	08-03-2006	Rabinovich et al.	
	AF2*	US-2005/0237244	10-27-2005	Annabi et al.	
	AG2*	US-6,140,975	10-31-2000	Cohen	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3]-Number[4]-Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T[6]
	BA**	JP-2001-217632	08-10-2001	Matsushita Electric Ind. Co. Ltd.		√
	BB**	EP-0 884 796	12-16-1998	Matsushita Electronic Industrial C., Ltd.		
	BC**	EP-0 777 293	07-03-2002	Murata Manufacuring Co., Ltd.		
	BD**	EP-1 091 445	04-11-2001	Matsushita Electric Industrial Co., Ltd.		
	BE**	WO-01/54225	07-26-2001	Fractus, S.A.		
	BF**	WO-01/11721	02-15-2001	Allgon AB		
	BG**	GB-2 361 584	10-24-2001	Motorola Limited		
	BH**	WO-00/77884	12-21-2000	Harada Industries (Europe) Limited		
	BI**	WO-2004/0025778	03-25-2004	Fractus S.A.		
	BJ**	EP-0 986 130	03-15-2000	Siemens AG		
	BK**	EP-1 237 224	09-04-2002	Siemens AG		
	BL**	EP-1 198 027	04-17-2002	The Furukawa Electric Co., Ltd.		
	BM**	WO-01/48861	07-05-2001	Allgon AB		
	BN**	WO-02/35646	05-02-2002	Fractus-Ficosa International, UTE		
	BO**	WO-99/56345	11-04-1999	Intenna Technology AB		
	BP**	WO-96/38881	12-05-1996	Ericsson Inc.		
	BQ**	WO-01/26182	04-12-2001	Smarteq Wireless AB		
	BR**	EP-1367671	12-03-2003	Ngk Spark Plug Co., Ltd.		
	BS	WO-0235652	05-02-2002	ACE Technology		
	BT	WO-2005076409	08-18-2005	Fractus SA		

Examiner Signature	/Hoang Nguyen/	Date Considered	08/23/2010

5306477v.1 47005/P018WUSC1

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NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	CA**	C. Puente et al., "Small But Long Koch Fractal Monopole", Electronics Letters, January 8, 1998, vol. 34, no. 1, pages 9-10	
	CB**	Carles Puente Baliarda et al., "The Koch Monopole: A Small Fractal Antenna", IEEE Transactions on Antennas and Propagation, vol. 48, no. 11, November 2000, pages 1773-1781	
	CC**	Nathan Cohen, "Fractal Antenna Applications in Wireless Telecommunications", IEEE, 1997, pages 43-49	
	CD**	C. Puente et al., "Multiband Properties of a Fractal Tree Antenna Generated by Electrochemical Deposition", Electronics Letters, December 5, 1996, vol. 32, no. 25, pages 2298-2299	
	CE	SIM, "An Internal Triple-band antenna for PCS/IMT-2000/Bluetooth Applications", IEEE Antennas and Wireless Propagation Letters, 2004, vol. 3	

Examiner Signature		Date Considered	

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	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7081857	B2	2006-07-25	KINNUNEN ET AL	
	2	6275198	B1	2001-08-14	KENOUN ET AL	
	3	7289072	B2	2007-10-30	SAKURAI	
	4	5943020		1999-08-24	LIEBENDOERFER ET AL	

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20070152894	A1	2007-07-05	SANZ ET AL	
	2	20070046578	A1	2007-03-01	PROS ET AL	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

(5)

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	1011167	EP	A1	2000-06-21	MATSUSHITA ELECTRIC INDUSTRIAL CO.		☐
	2	2004/057701	WO	A1	2004-07-08	FRACTUS		☐
	3	99/67851	WO	A1	1999-12-29	ALLGON AB		☐
	4	00/03451	WO	A1	2000-01-20	MOTECO AB		☐

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NON-PATENT LITERATURE DOCUMENTS

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99**)	Application Number	12222848
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20030184482	A1	2003-10-02	BETTIN	
	2	20020000940	A1	2002-01-03	MOREN	

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FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	02078123	WO	A1	2002-10-03	TELEFONAKTIEBOLAGET L.M. ERICSSON		☐
	2	0003451	WO	A1	2002-01-20	MATECO AB		☐

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	1	COHEN, N. Fractal antenna applications in wireless telecommunications, Professional Program Proceedings, Electronics Industries Forum of New England, May 1997.	☐

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Examiner Signature		Date Considered	

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(8)

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U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6674405	B2	2004-01-06	WANG	
	2	6839040	B2	2005-01-04	HUBER	

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S.PATENT APPLICATION PUBLICATIONS

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	1	Handbook of antennas in wireless communications, CRC Press, 2002	☐

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U.S.PATENTS

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	1	6950071	B2	2005-09-27	WEN	

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20040140938	A1	2004-07-22	KADAMBI	
	2	20020149527	A1	2002-10-17	WEN	
	3	20040004574	A1	2004-01-08	WEN	

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FOREIGN PATENT DOCUMENTS

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	1	WONG, Planar antennas for wireless communications, Wiley Interscience, 2003	☐

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U.S.PATENTS

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	1	7057560	B2	2006-06-06	ERKOCEVIC	

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20040212545	A1	2004-10-28	LI	

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FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	0235652	WO	A1	2002-05-02	ACE TECHNOLOGY		☐
	2	2005076409	WO	A1	2005-08-18	FRACTUS		☐

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487 12228487 - GAU: 2821
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	WONG, Planar antennas for wireless communications, John Wiley & Sons, 2003	☐
	2	SIM, An internal triple-band antenna for PCS/IMT-2000/Bluetooth applications, IEEE Antennas and Wireless Propagation Letters, 2004, Vol. 3	☐

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	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5572223		1996-11-05	PHILLIPS	
	2	6384790	B2	2002-05-07	DISHART	
	3	7126537	B2	2006-10-24	COHEN	
	4	7069043	B2	2006-06-27	SAWAMURA	
	5	4123756		1978-10-31	NAGATA	

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	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
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12228487 GAU: 2821

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	12/228,487
Filing Date	8-13-2008
First Named Inventor	JAUME ANGUERA PROS
Art Unit	2821
Examiner Name	NA
Attorney Docket Number	47405-8018US01

U.S.PATENTS						
Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	4389651		1983-06-21	TOMASKY	
	2	5337065		1994-08-09	BONNET ET AL.	
	3	5943020		1999-08-24	LIEBENDOERFER ET AL.	
	4	6271794		2001-08-07	GEERAERT	
	5	6822611		2004-11-23	KONTOGEORGAKIS ET AL	
	6	6963310		2005-11-08	HORITA ET AL.	
	7	7068230		2006-06-27	QI ET AL.	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	~~10584442~~ 12/228,487
Filing Date	~~200€ 18~~ 12228487 - GAU: 2821 8-13-2008
First Named Inventor	JAUME ANGUERA PROS
Art Unit	2821
Examiner Name	NA
Attorney Docket Number	~~68349-00025USPX~~ 47005-P018WUSC1

(17)

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20050259031		2005-11-24	SANZ ET AL.	

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FOREIGN PATENT DOCUMENTS

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	1		☐

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(18)

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12/228,487
	Filing Date	8-13-08
	First Named Inventor	Dros
	Art Unit	2821
	Examiner Name	
	Attorney Docket Number	47005-P018W45C1

U.S.PATENTS						
Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6343208	B1	2002-01-29	YING	
	2	6614400	B2	2003-10-02	EGOROV	
	3	5248988		1993-09-28	MAKINO	
	4	5457469		1995-10-10	DIAMOND	
	5	5990838		1999-11-23	BURNS	
	6	5986610		1999-11-16	MIRON	
	7	6266023	B1	2001-07-24	NAGY	
	8	6801164	B2	2004-10-05	BIT-BABIK	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	12/228,487
Filing Date	8-13-2008
First Named Inventor	Pros
Art Unit	2821
Examiner Name	
Attorney Docket Number	47005-P018W4SC1

19

	9	6281846	B1	2001-08-28	PUENTE	
	10	4123756		1978-10-31	NAGATA	
	11	5572223		1996-11-05	PHILLIPS	
	12	6384790	B2	2002-05-07	DISHART	
	13	7126537	B2	2006-10-24	COHEN	
	14	7069043	B2	2006-06-27	SAWAMURA	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20020140615	A1	2002-10-03	PUENTE BALIARDA	
	2	20010050637	A1	2001-12-13	AOYAMA	

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FOREIGN PATENT DOCUMENTS

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	12/228,487
Filing Date	08/13/2008
First Named Inventor	Pros
Art Unit	2821
Examiner Name	
Attorney Docket Number	47005-P018WUSC1

(20)

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	2004042868	WO	A1	2004-05-21	FRACTUS		☐
	2	1367671	EP	A2	2003-12-03	NGK SPARK PLUG CO. LTD.		☐
	3	03034538	WO	A1	2003-04-24	FRACTUS		☐
	4	0938158	EP	A2	1999-02-17	NOKIA MOBILE PHONES LTD.		☐
	5	03034544	WO	A1	2003-04-24	FRACTUS SA		☐
	6	2004001894	WO	A1	2003-12-31	FRACTUS SA		☐
	7	02078123	WO	A1	2002-10-03	TELEFONAKTIEBOLAG ET LM ERICSSON		☐
	8	2001332924	JP		2001-11-30	SHARP KK		☐
	9	10247808	JP		1998-09-14	MURATA MANUFACTURING		☐
	10	2002050919	JP		2002-02-15	TAIYO YUDEN		☐

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12228487 - GAU: 2821

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12/228,487
	Filing Date	08/13/2008
	First Named Inventor	Pros
	Art Unit	2821
	Examiner Name	
	Attorney Docket Number	47005-P018U45C1

(21)

	11	0938158	EP		1999-08-25	NOKIA MOBILE PHONES LTD		☐

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NON-PATENT LITERATURE DOCUMENTS

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	1	PUENTE, Fractal antennas, Universitat Politècnica de Catalunya, 1997	☐
	2	PUENTE, Multiband fractal antennas and arrays, Fractals engineering - from theory to industrial applications, 1994	☐
	3	NAKANO et al. Realization of dual-frequency and wide-band VSWR performances using normal-mode helical and inverted-F antennas, IEEE Transactions on Antennas and Propagation, 1998, vol. 46, No. 6	☐
	4	MORISHITA et al., Design concept of antennas for small mobile terminals and the future perspective, IEEE Antennas and Propagation Magazine, 2002	☐
	5	DOU et al, Small broadband stacked planar monopole, Willey Interscience, 2000	☐
	6	STRUGATSKY, Multimode multiband antenna. Tactical communications: Technology in transition. Proceedings of the tactical communications conference, 1992	☐
	7	SZKIPALA, Fractal antennas, TEAT, 2001	☐

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12/228,487
	Filing Date	08/13/2008
	First Named Inventor	Ros
	Art Unit	2821
	Examiner Name	
	Attorney Docket Number	47005-P018W4SC1

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First Named Inventor	Jaume Anguera Pros et al
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Examiner Name	Not Yet Assigned
Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
/H.N./	1	6903688	B2	2005-06-07	EDVARDSSON	

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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FOREIGN PATENT DOCUMENTS

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	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

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Examiner Signature	/Hoang Nguyen/	Date Considered	08/23/2010

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

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PATENT AND TRADEMARK OFFICE

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First Named Inventor	Jaume Anguera Pros
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U.S.PATENTS

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/H.N./	1	6831606	B2	2004-12-14	SAJADINIA	
/H.N./	2	6741215	B2	2004-05-25	GRANT ET AL	

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	1					

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	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T5
/H.N./	1	Teng , P. L. ; Wong , K. L. , Planar monopole folded into a compact structure for very-low-profile multiband mobile-phone antenna, Microwave and optical technology letters, April 05, 2002	☐
/H.N./	2	Downunder Wireless LLC, Plaintiff, v. HTC Corp; LG Electronics; Motorola Inc.; Nokia Corp.; Pantech Wireless Inc.; Personal Communications Devices LLC; Sharp Electronics Corp; and Sony Ericsson Mobile Communications (USA) Inc., Defendants. Civil action no. 2:09-cv-206. Jury trial requested. Filed 06/29/2009	☐

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Examiner Signature	/Hoang Nguyen/	Date Considered	08/23/2010

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Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12228487	PROS ET AL.
	Examiner	Art Unit
	HOANG V NGUYEN	2821

SEARCHED			
Class	Subclass	Date	Examiner
343	700MS, 702, 895, 833, 834	8/23/10	HN

SEARCH NOTES		
Search Notes	Date	Examiner
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INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

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U.S.PATENTS

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	1	6995720	B2	2006-02-07	SHIKATA	
	2	7403164		2008-07-22	SANZ ET AL	
	3	7411556		2008-08-12	SANZ ET AL	
	4	6243592		2001-06-05	NAKADA ET AL	

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20070152984	A1	2007-07-05	ORDING ET AL	

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FOREIGN PATENT DOCUMENTS

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	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

12228487 GAU: 2821

OIPE IAP39 DEC 29 2008 PATENT & TRADEMARK OFFICE

OIPE IAP13 DEC 29 2008 PATENT & TRADEMARK OFFICE

	1	62-262502	JP		1987-11-14	YUNIDEN KK		☒
	2	2003-347835	JP		2003-12-05	MURATA		☒
	3	2001-251128	JP		2001-09-14	MATSUSHITA ELECTRIC		☒
	4	10-200327	JP		1998-07-31	SHARP		☒
	5	10-117108	JP		1998-05-06	MATSUSHITA ELECTRIC		☒

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NON-PATENT LITERATURE DOCUMENTS

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U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
/H.N./	1	7511675		2009-03-31	PUENTE, CARLES	

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
/H.N./	1	20090248112		2009-10-01	MUMBRU, JOSEP	
/H.N./	2	20090140942		2009-06-04	MIKKOLA, JYRKI	

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FOREIGN PATENT DOCUMENTS

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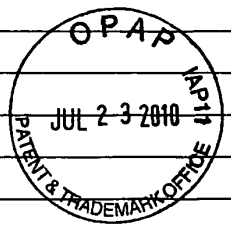
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U.S.PATENTS

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FOREIGN PATENT DOCUMENTS

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1

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	Attorney Docket Number	47005-P018WUSC1

	1	Shnitkin, "Analysis of Log-Periodic Folded Dipole Array" (September 1992).	☐
	2	Sinclair, "Theory of Models of Electromagnetic Systems," Proceedings of the IRE, November 1948.	☐
	3	Snow, W. L., et al. "Ku-Band Planar Spiral Antenna," The Nineteenth Symposium on The USAF Antenna Research and Development Program, October 14 – 16, 1969.	☐
	4	Snow, W. L., "UHF Crossed-Slot Antenna and Applications," The Thirteenth Symposium on The USAF Antenna Research and Development Program, October 14 - 18, 1963.	☐
	5	Soler, J., Romeu, J., "Dual-band Sierpinski fractal monopole antenna," IEEE Antennas and Propagation Society International Symposium, 2000, Volume 3, pp. 1712 – 1715.	☐
	6	Song, C.T.P., Hall, P.T., Ghafouri-Shiraz, H. and Wake, D., "Fractal Stacked Monopole With Very Wide Bandwidth," Electronics Letters, 35, 12, June 10, 1999.	☐
	7	Stang, Abstracts of the 12th Annual Symposium (Oct.16–19, 1962).	☐
	8	Stang, Paul F., "Balanced Flush Mounted Log-Periodic Antenna for Aerospace Vehicles," Twelfth Annual Symposium on USAF Antenna Research and Development, Volume 1, October 16-19, 1962.	☐
	9	Stutzman, "Antenna Theory and Design," 2nd ed., 1998.	☐
	10	Taga, Tokio and Tsunekawa, Kouichi, "Performance Analysis of a Built-In Planar Inverted F Antenna for 800 MHz Band Portable Radio Units," IEEE Journal on Selected Areas in Communications, Vol. SAC-5, No. 5, June 1987.	☐
	11	Tanner, Robert L., et al., "Electronic Counter Measure Antennas for a Modern Electronic Reconnaissance Aircraft," The Fourth Symposium on The USAF Antenna Research and Development Program, October 17 - 21, 1954.	☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

	12	Teeter, W. L. and Bushore, K. R., "A Variable-Ratio Microwave Power Divider and Multiplexer," IRE Transactions on Microwave Theory and Techniques, 5, 4, October 1957.	☐
	13	Teng, Pey-Ling and Wong, Kin-Lu, "Planar Monopole Folded Into A Compact Structure For Very Low-Profile Multiband Mobile-Phone Antenna," Microwave and Optical Technology Letters, Vol. 33, No. 1. (April 5, 2002).	☐
	14	Terman, F. E., Radio Engineering, New York, McGraw-Hill Book Company, 1947.	☐
	15	The Glen L. Martin Company, "Antennas for USAF B-57 Series Bombers" The Second Symposium on the USAF Antenna Research and Development Program, October 19-23, 1952.	☐
	16	Turner and Richard, "Development of an Electrically Small Broadband Antenna," presented at the Eighteenth Symposium on The USAF Antenna Research and Development Program, October 15-17, 1968.	☐
	17	Turner, "Broadband Passive Electrically Small Antennas for TV Application," presented at the Proceedings of the 1977 Antenna Applications Symposium on April 27-29, 1977 at Robert Allerton Park at the University of Illinois.	☐
	18	Virga, "Low-Profile Enhanced Bandwidth PIFA Antennas for Wireless Communications Packaging," IEEE Transactions on Microwave Theory and Techniques, Vol. 45, No. 10 (October 1997).	☐
	19	Volakis, J., Antenna Engineering Handbook, pp. 39-7 to -15 (4th ed. 2007).	☐
	20	Walker, G.J. and James, J.R., "Fractal Volume Antennas," Electronics Letters, 34, 16, August 6, 1998.	☐
	21	Wall, H. et al. "Communications Antennas for Mercury Space Capsule," The Eleventh Symposium on The USAF Antenna Research and Development Program, October 16 - 20, 1961.	☐
	22	Watanbe, T., Furutani, K., Nakajima, N. and Mandai, H., "Antenna Switch Duplexer for Dualband Phone (GSM/DCS) Using LTCC Multilayer Technology," IEEE MTT-S International Microwave Symposium Digest, 1, June 13-19, 1999.	☐

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

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	Attorney Docket Number	47005-P018WUSC1

	23	Weeks, W. L., Antenna Engineering, New York, McGraw-Hill Book Company, 1968.	☐
	24	Weeks, W. L., Electromagnetic Theory for Engineering Applications, New York John Wiley & Sons, 1964.	☐
	25	Wegner, E. D., B-70 Antenna System, Thirteenth Annual Symposium on USAF Antenna Research and Development, 1963.	☐
	26	Wheeler, H.A., "The Radian Sphere Around a Small Antenna," IEEE Proc., vol. 47, pp. 1325-31 (August 1959).	☐
	27	Wheeler, H. A., "Fundamental Limitations of Small Antennas," Proceedings of the I.R.E. (December 1947).	☐
	28	Wheeler, H.A., "Small Antennas," The Twenty-Third Symposium on The USAF Antenna Research and Development Program, October 10 – 12, 1973.	☐
	29	Wong, K.-L. and Yang, K.-P., "Modified planar inverted F antenna," Electronics Letters, 34, 1, January 8, 1998.	☐
	30	Wong, Kin-Lu and Sze, Jia-Yi, "Dual-Frequency Slotted Rectangular Microstrip Antenna," Electronics Letters, Vol. 34, No. 14, July 9, 1998.	☐
	31	Wong et al., "Broadband Microstrip Antennas With Integrated Reactive Loading," Microwave Conference, 1999 Asia Pacific, Nov. 1999, vol. 2, pp.352-54.	☐
	32	McDowell, E. P., "High Speed Aircraft Antenna Problems and Some Specific Solutions for MX-1554," The Second Symposium on the USAF Antenna Research and Development Program, October 19-23, 1952.	☐
	33	McDowell, E. P., "Flush Mounted X-Band Beacon Antennas for Aircraft," The Third Symposium on The USAF Antenna Research and Development Program, October 18 - 22, 1953.	☐

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

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	Attorney Docket Number	47005-P018WUSC1

	34	Parker, "Convoluted array elements and reduced size unit cells for frequency selective surfaces," IEE Proceedings-H, Antennas an Microwave Propagation, vol. 138, no. 1, Feb. 1991, p.19-22.	☐
	35	Yang and Wang, "Compact Dual-Frequency Operation of Rectangular Microstrip Antennas," IEEE, pp. 1652-55 (1999).	☐

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EXAMINER SIGNATURE

Examiner Signature	/Hoang Nguyen/	Date Considered	08/23/2010

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U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	3079602		1963-02-26	DUHAMEL	
	2	3689929		1972-09-05	MOODY	
	3	4318109		1982-03-02	WEATHERS	
	4	4356492		1982-10-26	KALOI	
	5	4536725		1985-08-20	HUBLER	
	6	4608572		1986-08-26	BLAKNEY	
	7	4860019		1989-08-22	JIANG	
	8	5014346		1991-05-07	PHILLIPS	

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	Attorney Docket Number	47005-P018WUSC1

	9	5075691		1991-12-24	GARAY	
	10	5307075		1994-04-26	HUYNH	
	11	5355318		1994-10-11	DIONNET	
	12	5363114		1994-11-08	SHOEMAKER	
	13	5453752		1995-09-25	WANG	
	14	5557293		1996-09-25	McCOY	
	15	5872546		1999-02-16	IHARA	
	16	5809433		1998-09-15	THOMPSON	
	17	5926139		1999-07-20	KORISCH	
	18	5936587		1999-08-10	GUDILEV	
	19	5986609		1999-11-16	SPALL	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

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	Attorney Docket Number	47005-P018WUSC1

	20	5995052		1999-11-30	SADLER	
	21	6011699		2000-01-04	MURRAY	
	22	6094179		2000-07-25	DAVIDSON	
	23	6097339		2000-08-01	FILIPOVIC	
	24	6160513		2000-12-12	DAVIDSON	
	25	6122533		2000-09-19	ZHANG	
	26	6329951		2001-12-11	WEN	
	27	6140966		2000-10-31	PANKINAHO	
	28	6141540		2000-10-31	RICHARDS	
	29	6147655		2000-11-14	ROESNER	
	30	6181281		2001-06-30	DESCLOS	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

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	31	6195048		2001-02-27	CHIBA	
	32	6198442		2001-03-06	RUTKOWSKI	
	33	6201501		2001-03-13	ARKKO	
	34	6204826		2001-03-20	RUTKOWSKI	
	35	6211826		2001-03-20	AOKI	
	36	6215474		2001-04-10	SHAH	
	37	6236366		2001-05-22	YAMAMOTO	
	38	6239765		2001-05-29	JOHNSON	
	39	6243592		2001-06-05	NAKADA	
	40	6259407		2001-07-10	TRAN	
	41	6266538		2001-07-24	WALDRON	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

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	42	6288680		2001-09-11	TSURU	
	43	6300914		2001-10-09	YANG	
	44	6317084		2001-11-13	CHEN	
	45	6408190		2002-06-18	YING	
	46	6417816		2002-07-09	SADLER	
	47	6352434		2002-03-05	EMMERT	
	48	6353443		2002-03-05	YING	
	49	6366243		2002-04-02	ISOHALATA	
	50	6452553		2002-09-17	COHEN	

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear

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	1	20010044320		2001-11-22	ONO	

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FOREIGN PATENT DOCUMENTS

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	1	2224466	CN		1996-04-10	XIANCHEN		☐
	2	0590671	EP	B1	1997-12-29	SEKINE		☐
	3	0749176	EP		1996-12-18	SANAD		☐
	4	0902472	EP		1999-03-17	FUREY		☐
	5	2112163	ES		1998-11-16	BALIARDA		☐
	6	0766343	EP		1997-04-02	IHARA		☐
	7	2317994	GB		1998-04-08	KITCHENER		☐
	8	5-308223	JP		1993-11-19	KEIZO		☐

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	Attorney Docket Number	47005-P018WUSC1

	9	9-246852	JP		1997-09-19	HIRABE		☐
	10	10-303637	JP		1998-11-13	KUDO		☐
	11	11-004113	JP		1999-01-06	KAWABATA		☐
	12	11-136015	JP		2005-04-06	SUZUKI		☐
	13	11-220319	JP		1999-08-10	IRIYAMA		☐
	14	11-27042	JP		1999-01-29			☐
	15	60-85530	JP		1994-03-25	KANAYAMA		☐
	16	H6-252629	JP		1994-09-09	KURODA		☐
	17	H10-163748	JP		2010-05-12	NAKADA		☐
	18	88/09065	WO		1988-11-17	COLEMAN		☐
	19	98/05088	WO		1998-02-05	SCHAMBERGER		☐

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	20	98/20578	WO		1998-05-14	GUDILEV		☐
	21	99/65102	WO		1999-12-16	DUPONT		☐
	22	01/17063	WO		2001-03-08	YING		☐
	23	01/56111	WO		2001-08-02	RITCHER		☐
	24	9903166	WO		1999-01-21	GAMALIELSSON		☐
	25	9927608	WO		1999-06-03	COHEN		☐
	26	0108257	WO		2001-02-01	ROWELL		☐
	27	0122528	WO		2001-03-29	BALIARDA		☐
	28	0133665	WO		2001-05-10	JOHNSON		☐

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	Attorney Docket Number	47005-P018WUSC1

	1	Adcock, M. D., "New Type Feed for High Speed Conical Scanning," The Second Symposium of the USAF Antenna Research and Development Program, October 19-23, 1952	☐
	2	Andersen, J. B., "Low- and Medium-Gain Microwave Antennas," in A. W. Rudge, K. Milne, A. D. Olver, and P. Knight (eds.), The Handbook of Antenna Design, Volumes 1 and 2, London, Peter Peregrinus Ltd., 1986.	☐
	3	Azadegan and Sarabandi, Design of Miniature Slot Antennas, IEEE Antennas and Propagation Society International Symposium, 2001 Digest, vol. 4 pp. 565 - 568 (July 8, 2001).	☐
	4	Balanis, "Antenna Theory: Analysis and Design," John Wiley & Sons: 1997.	☐
	5	Barrick, William, "A Helical Resonator Antenna Diplexer," The Tenth Symposium on The USAF Antenna Research and Development Program, October 3 - 7, 1960.	☐
	6	Batson, D. et al., "VHF Unfurlable Turnstile Antennas," The Nineteenth Symposium on The USAF Antenna Research and Development Program, October 14 – 16, 1969	☐
	7	Besthorn, J.W., "1.0-to 21.0-GHz Log-Periodic Dipole Antenna," presented at the Eighteenth Annual Symposium on The USAF Antenna Research and Development Program, October 15–17, 1968.	☐
	8	Blackband, W. T., "Coaxial Transmission Lines and Components," in A. W. Rudge, K. Milne, A. D. Olver, and P. Knight (eds.), The Handbook of Antenna Design, Volumes 1 and 2, London, Peter Peregrinus Ltd., 1986	☐
	9	Bokhari, S.A., Zurcher, J.F., Mosig, J.R. and Gardiol, F. E., "A Small Microstrip Patch Antenna with a Convenient Tuning Option," IEEE Transactions on Antennas and Propagation, Vol. 44, No. 11, November 1996.	☐
	10	"Broadband Passive Electrically Small Antennas for TV Application," presented at the Proceedings of the 1977 Antenna Applications Symposium on April 27-29, 1977 at Robert Allerton Park at the University of Illinois.	☐
	11	Brown, A. R. and Rebeiz, G. M. "A High-Performance Integrated K-Band Diplexer," IEEE Transactions on Microwave Theory and Techniques, 47, 8, August 1999.	☐

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

	12	Burnett, G. F., "Antenna Installations on Super Constellation Airborne Early Warning and Control Aircraft," The Fourth Symposium on The USAF Antenna Research and Development Program, October 17 - 21, 1954.	☐
	13	Bushman, F. W. et al., "The Boeing B-52 All Flush Antenna System," The Fifth Symposium on The USAF Antenna Research and Development Program, October 16 - 20, 1955.	☐
	14	Campi, M., "Design of Microstrip Linear Array Antennas," 1981 Antenna Applications Symposium, September 23 – 25, 1981	☐
	15	Carver, Keith R. and Mink, James W., "Microstrip Antenna Technology," IEEE Transactions on Antennas and Propagation, AP-29, 1, January 1981, pp. 2-24.	☐
	16	Chen, "Dual Frequency Microstrip Antenna with Embedded Reactive Loading," Microwave and Optical Technology Letters, vol. 23, no.3, Nov.5, 1999.	☐
	17	Chen, "Square-Ring Microstrip Antenna with a Cross Strip for Compact Circular Polarization Operation", IEEE Transactions on Antennas and Propagation, vol. 47, no. 10, Oct. 1999.	☐
	18	Chen, M. H., Tung, T. X. and Yodokawa, T. "A Compact EHF/SHF Dual Frequency Antenna," IEEE International Symposium on Antennas and Propagation Digest, 4, May 7-11, 1990.	☐
	19	Chiba, N., Amano, T. and Iwasaki, H., "Dual-Frequency Planar Antenna for Handsets," Electronics Letters, 34, 35, December 10, 1998, pp. 2362-2363.	☐
	20	Cohen, "NEC4 Analysis of a Fractalized Monofilar Helix in an Axial Mode," CONFERENCE PROCEEDINGS VOLUME II for the 14th Annual Review of Progress in APPLIED COMPUTATIONAL ELECTROMAGNETICS at the Naval Postgraduate School in Montery, CA, March 16-20, 1998.	☐
	21	Cohen, Nathan, "Fractal Element Antennas," Journal of Electronic Defense, July 1997.	☐
	22	Cohn, S. B., "Flush Airborne Radar Antennas," The Third Symposium on The USAF Antenna Research and Development Program, October 18 - 22, 1953.	☐

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

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	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

	23	Collier and Shnitkin, "Summary of The Monopole as a Wideband Array Antenna Element," presented at the 1993 Antenna Applications Symposium on September 23, 1993.	☐
	24	Contreras, "Fractal Miniature Antenna" UPC Baix Llobregat Polytechnic University Project Research (September 1997).	☐
	25	Daniel, Kumar, "Rectangular Microstrip Antennas with stub along the non-radiating edge for Dual Band Operation," IEEE Antennas and Propagation Society International Symposium 1995 Digest, vol.4, p.2136-2139.	☐
	26	Deschamps, G. et al., "Microstrip Microwave Antenna," The Third Symposium on The USAF Antenna Research and Development Program, October 18 – 22, 1953.	☐
	27	Dickstein, Harold D., "Antenna System for a Ground Passive Electronic Reconnaissance Facility," The Eighth Symposium on The USAF Antenna Research and Development Program, October 20 - 24, 1958.	☐
	28	DuHamel R. H. and Isbell, D. E., "Broadband Logarithmically Periodic Antenna Structures," IRE International Convention Record, 5, Part 1, March 1957, pp. 119- 128.	☐
	29	Du Plessis, "Tuning Stubs for Microstrip Patch Antennas," IEEE Antennas and Propagation Magazine, vol. 36, issue 6, pp. 52-56, 1993.	☐
	30	Dyson, J.D., "The Non-Planar Equiangular Spiral Antenna," The Eighth Symposium on The USAF Antenna Research and Development Program, October 20 – 24, 1958.	☐
	31	Dyson, J.D., "The Equiangular Spiral Antenna," The Fifth Symposium on The USAF Antenna Research and Development Program, October 16 – 20, 1955.	☐
	32	Ellis, A.R., "Airborne U-H-F Antenna Pattern Improvements," The Third Symposium on The USAF Antenna Research and Development Program, October 18 – 22, 1953.	☐
	33	Esteban, J. and Rebollar, J. M., "Design and Optimization of a Compact Ka-Band Antenna Diplexer," IEEE International Symposium on Antennas and Propagation Digest, 1, June 18-23, 1995, pp. 148-151.	☐

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

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	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

	34	ETSI, "Global System for Mobile Communications: Digital cellular telecommunications system (Phase 2); Mobile Station (MS) conformance specification; Conformance specification (GSM 11.10-1)," European Telecommunication Standard, March 1996.	☐
	35	ETSI, "Global System for Mobile Communications: Digital cellular telecommunications system (Phase 2+); Abbreviations and acronyms (GSM 01.04)," GSM Technical Specification, Version 5.0.0, March 1996.	☐
	36	ETSI, "Global System for Mobile Communications: Digital cellular telecommunications system (Phase 2); Types of Mobile Stations (MS) (GSM 02.06)," European Telecommunication Standard, 3rd ed., May 1996.	☐
	37	ETSI, "Global System for Mobile Communications: Digital cellular telecommunications system (Phase 2+); Radio transmission and reception (GSM 05.05)," GSM Technical Specification, Version 5.2.0, July 1996.	☐
	38	ETSI, "Global System for Mobile Communications: Digital cellular telecommunications system (Phase 2); Mobile Station (MS) conformance specification; Part 1: Conformance specification (GSM 11.10-1 version 4.21.1)," European Telecommunication Standard, 8th ed., August 1998.	☐
	39	Fenwick, R., "A New Class of Electrically Small Antennas," Presented at the Fourteenth Annual Symposium on USAF Antenna Research and Development, presented Oct. 6-8, 1964.	☐
	40	Ferris, J. E. et al., "A Status report of an Azimuth and Elevation Direction Finder" The Eighteenth Symposium on The USAF Antenna Research and Development Program, October 15 – 17, 1968.	☐
	41	Force, R.D., et al. "Synthesis of Multilayer Walls for Radomes of Aerospace Vehicles," The Seventeenth Symposium on The USAF Antenna Research and Development Program, November 14 – 17, 1967.	☐
	42	Photos of Fractus Panel 01 product (at least as early as 1998)	☐
	43	Photos of Fractus MSPK product (at least as early as 1998)	☐
	44	Gilbert, R., Structurally-Integrated Optically-Reconfigurable Antenna Array 1995 Antenna Applications Symposium, September 20 - 22, 1995.	☐

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

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	Attorney Docket Number	47005-P018WUSC1

	45	Gillespie, Edmond S., "Glide Slope Antenna in the Nose Radome of the F104A and B," The Seventh Symposium on The USAF Antenna Research and Development Program, October 21 – 25, 1957.	☐
	46	Gray, "Electronically Steerable Yagi-Uda Microstrip Patch Antenna," IEEE Transactions on Antennas and Propagation, Vol. 46, No. 5, May 1998.	☐
	47	Greiser, J. W. and Brown, G. S., "A 500:1 Scale Model of Warla – A Wide Aperture Radio Location Array," presented at The Thirteenth Symposium on the USAF Antenna Research and Development Program on October 14-18, 1963 at the University of Illinois Antenna Laboratory in Urbana, Illinois.	☐
	48	Guo, Y.X. et al., "Double U-slot rectangular patch antenna," Electronics Letters, vol. 34, no. 19, pp. 1805-1806 (Sept. 17, 1998).	☐
	49	Gupta, K.C., "Broadbanding Techniques for Microstrip Patch Antennas – A Review," Antenna Applications Symposium, September 21-23, 1988.	☐
	50	Gupta, Microstrip Antenna Design, Norwood, MA, Artech House 1988.	☐

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U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	4038662		1977-07-26	TURNER	
	2	4571595		1986-02-18	PHILLIPS	
	3	5898404		1999-04-27	JOU	
	4	5966098		1999-10-12	QI	
	5	6031505		2000-02-29	QI	
	6	6104349		2000-08-15	COHEN	
	7	6452556		2002-09-17	HA	
	8	6459413		2002-10-01	TSENG	

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	Attorney Docket Number	47005-P018WUSC1

	9	6476769		2002-11-05	LEHTOLA	
	10	6549789		2003-04-15	KFOURY	
	11	6693604		2004-02-17	WASHIRO	
	12	6697022		2004-02-24	PONCE DE LEON	
	13	6831606		2004-12-14	SAJADINIA	
	14	6839040		2005-01-04	HUBER	
	15	6853352		2005-02-08	NEVERMANN	
	16	7148850		2006-12-12	PUENTE BALIARDA	

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20010050636		2001-12-13	WEINBERGER	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Attorney Docket Number	47005-P018WUSC1

	2	20040090372		2004-05-13	DI NALLO	

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FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	2142280	ES		2000-11-26	BALIARDA		☐
	2	03156847	JP		1993-01-14	YASUSHIRO		☐
	3	96297755	WO		1996-09-26	PRUDHOMME		☐
	4	9706578	WO		1997-02-20	COHEN		☐

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NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	Ali, M. et al., "A Triple-Band Internal Antenna for Mobile Hand-held Terminals," IEEE, 2002.	☐
	2	Deng, A T-Strip Loaded Rectangular Microstrip Patch Antenna for Dual-Frequency Operation IEEE Antennas and Propagation Society International Symposium, Aug. 1999, vol. 2, pp. 940-43.	☐

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

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	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

	3	Hagstrom, P., "Novel Ceramic Antenna Filters for GSM/DECT and GSM/PCN Network Terminals," The 8th IEEE International Symposium on Personal, Indoor, and Mobile Radio Communications, Volume 3, September 1-4, 1997.	☐
	4	Halloran, T.W. et al. "A Dual Channel VHF Telemetry Antenna System for Re- Entry Vehicle Applications," The Eleventh Symposium on The USAF Antenna Research and Development Program, October 16 – 20, 1961.	☐
	5	Hikata, M., Shibagaki, N., Asai, K., Sakiyama, K. and Sumioka, A., "New Miniature SAW Antenna Duplexer Used in GHz-Band Digital Mobile Cellular Radios," 1995 IEEE Ultrasonics Symposium, 1, November 7-10, 1995.	☐
	6	Hikita, M., Ishida, Y., Tabuchi, T. and Kurosawa, K., "Miniature SAW Antenna Duplexer for 800-MHz Portable Telephone Used in Cellular Radio Systems," IEEE Transactions on Microwave Theory and Techniques, 36, 6, June 1988.	☐
	7	Hill, J.E. et al., "An Integrated Strip-Transmission-Line Antenna System for JBand," The Twenty-Third Symposium on The USAF Antenna Research and Development Program, October 10 – 12, 1973.	☐
	8	Hofer, D.A., Kesler, O.B., and Loyet, L.L., "A Compact Multi-Polarized Broadband Antenna," Proceedings of the 1989 Antenna Applications Symposium, September 20-22, 1989.	☐
	9	Holtum, A. G., "A Dual Frequency Dual Polarized Microwave Antenna," The Sixteenth Symposium on The USAF Antenna Research and Development Program, October 11 – 13, 1966.	☐
	10	Holzschuh, D.L., "Hardened Antennas for Atlas and Titan Missile Site Communications," The Thirteenth Symposium on The USAF Antenna Research and Development Program, October 14 – 18, 1963.	☐
	11	Hong, "Compact microwave elliptic function filter using novel microstrip meander open-loop resonators" (March 14, 1996).	☐
	12	Hong and Lancaster, "Recent Advances in Microstrip Filters for Communications and Other Applications, IEEE, pp. 2/1-2/6 (1997).	☐
	13	Huynh, T. and Lee, K.F., "Single-layer single-patch wideband microstrip antenna," Electronics Letters, 31, 16, August 3, 1995.	☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Art Unit	2821
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	Attorney Docket Number	47005-P018WUSC1

	14	Hyneman, R.F., et al., "Homing Antennas for Aircraft (450-2500 MC)," The Fifth Symposium on The USAF Antenna Research and Development Program, October 16 – 20, 1955.	☐
	15	IEEE, IEEE Standard Definitions of Terms for Antennas, IEEE Std. 145-1983, New York, IEEE, 1983.	☐
	16	Ikata, O., Satoh, Y., Uchishiba, H., Taniguchi, H., Hirasawa, N., Hashimoto, K. and Ohmori, H., "Development of Small Antenna Duplexer Using SAW Filters for Handheld Phones," 1993 IEEE Ultrasonics Symposium, 1, October 31-November 3, 1993.	☐
	17	Ingerson, Paul G. and Mayes, Paul E., "Asymmetrical Feeders for Log-Periodic Antennas," The Seventeenth Symposium On The USAF Antenna Research and Development Program (November 14-17, 1967).	☐
	18	Isbell, D.E., "Non-Planar Logarithmically Periodic Antenna Structures," Seventh Annual Symposium on USAF Antenna Research and Development Program, October 21-25, 1957.	☐
	19	Isbell, D.E., "Multiple Terminal Log-Periodic Antennas," Eighth Annual Symposium on The USAF Antenna Research and Development Program, October 20–24, 1958.	☐
	20	Ishikawa, Y., Hattori, J., Andoh, M. and Nishikawa, T., "800 MHz High Power Bandpass Filter Using TM Dual Mode Dielectric Resonators," 21st European Microwave Conference, Volume 2, September 9-12, 1991.	☐
	21	James and Hall, "Handbook of Microstrip Antennas", vol. 1, 1989.	☐
	22	Jones, Howard S., "Conformal and Small Antenna Designs," Proceedings of the 1981 Antenna Applications Symposium, August 1981.	☐
	23	Kraus, John D., Antennas, Second Edition, New York, McGraw-Hill Book Company, 1988	☐
	24	Kuhlman, E.A., "A Directional Flush Mounted UHF Communications Antenna for High Performance Jet Aircraft for the 225-400 MC Frequency Range," The Fifth Symposium on The USAF Antenna Research and Development Program, October 16 – 20, 1955.	☐

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

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	Attorney Docket Number	47005-P018WUSC1

	25	Kumar, G. and Gupta, K., "Directly Coupled Multiple Resonator Wide-Band Microstrip Antennas," IEEE Transactions on Antennas and Propagation, AP-29, 1, June 1985, pp. 588-593.	☐
	26	Kumar, "Nonradiating Edges and Four Edges Gap-Coupled Multiple Resonator Broad-Band Microstrip Antenna," IEEE Transactions on Antenna and Propagation, Feb. 1985.	☐
	27	Kuo, Sam, "Frequency-Independent Log-Periodic Antenna Arrays With Increased Directivity and Gain," Twenty-First Annual Symposium on USAF Antenna Research and Development, October 12-14, 1971.	☐
	28	Kurpis, G. P., The New IEEE Standard Dictionary of Electrical and Electronics Terms, Fifth Edition, New York, IEEE, 1993.	☐
	29	Kutter, "Fractal Antenna Design" (Honors Thesis, University of Dayton, 1996).	☐
	30	Lancaster, et al., "Miniature Superconducting Filters" IEEE Transactions on Microwave Theory and Techniques (July 1996).	☐
	31	Larson, III, J. D., Ruby, R., Bradley, P. and Oshmyansky, Y., "A BAW Antenna Duplexer for the 1900 MHz PCS Band," 1999 IEEE Ultrasonics Symposium, 2, October 17-20, 1999.	☐
	32	Lee, J.C., "Analysis of Differential Line Length Diplexers and Long-Stub Filters," The Twenty-First Symposium on The USAF Antenna Research and Development Program, October 12 – 14, 1971.	☐
	33	Liu, "Dual-Frequency Planar Inverted-F Antenna," IEEE Transactions on Antennas and Propagation, Vol. 45, No. 10, October 1997.	☐
	34	D. Liu, "A Multi-branch monopole antenna for dual-band cellular applications," IEEE Antennas and Propagation society international symposium and URSI Radio science Meeting proceedings, vol.3, pp.1578- 1581, July 11-16,1999, USA.	☐
	35	Lo, Y. T., et al. "Theory and Experiment on Microstrip Antennas," 1978 Antenna Applications Symposium, September 20 – 22, 1978.	☐

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	Attorney Docket Number	47005-P018WUSC1

	36	Locus, Stanley S., "Antenna Design for High Performance Missile Environment," The Fifth Symposium on The USAF Antenna Research and Development Program, October 16 – 20, 1955.	☐
	37	Lu, Jui-Han & Wong, Kin-Lu, "Dual-Frequency Rectangular Microstrip Antenna with Embedded Spur Lines and Integrated Reactive Loading," Microwave & Optical Tech. Letters, 21, 4, May 20, 1999.	☐
	38	Lu and Wong, "Slot-loaded, meandered rectangular microstrip antenna with compact dual-frequency operation," Electronics Letters, Vol. 34, No. 11, May 28, 1998.	☐
	39	Lu and Wong, "Single-feed dual-frequency equilateral-triangular microstrip antenna with pair of spur lines," Electronics Letters, Vol. 34, No. 12, June 11, 1998.	☐
	40	Lu, "Single-Feed Dual-Frequency Rectangular Microstrip Antenna," IEEE Antennas and Propagation Society International Symposium, 2000, vol. 4, pp. 2192-95.	☐
	41	Lu et al., "Novel Dual-Frequency and Broad-Band Designs of Slot-Loaded Equilateral Triangular Microstrip Antennas," Microwave and Optical Technology Letters, Vol. 48, No. 7 (July, 2000, received July 27, 1998).	☐
	42	Maci, S. and Gentili, G. B., "Dual-Frequency Patch Antennas," IEEE Antennas and Propagation Magazine, 39, 6, December 1997.	☐
	43	Maci et al., "Dual-band Slot-loaded patch antenna", IEE Proc.-Microw. Antennas Propag., Vol. 142, No. 3, pp. 225-232 (June 1995).	☐
	44	Manteuffel, D. et al., Design Considerations for Integrated Mobile Phone Antennas, 11th Int'l Conference on Antennas & Propagation, Conference Publication No. 480, pp. 252–256 (April 17-20, 2001).	☐
	45	Martin, W.R., "Flush VOR Antenna for C-121C Aircraft," The Second Symposium on the USAF Antenna Research and Development Program, October 19-23, 1952.	☐
	46	Martin, R.W., et al. "An Unfurlable, High-Gain Log- Periodic Antenna for Space Use" The Seventeenth Symposium on The USAF Antenna Research and Development Program, November 14 – 17, 1967.	☐

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

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	47	May, "Aerial Magic," New Scientist, pp. 28-30 (January 31, 1998).	☐
	48	Mayes, P.E., et al. "Multi-Arm Logarithmic Spiral Antennas," The Tenth Symposium on The USAF Antenna Research and Development Program, October 3 – 7, 1960.	☐
	49	Mayes, P.E., et al. "High Gain Log-Periodic Antennas," The Tenth Symposium on The USAF Antenna Research and Development Program, October 3 – 7, 1960.	☐
	50	Mayes, P., et al. "Some Broadband, Low-Profile Antennas," 1985 Antenna Applications Symposium, September 18 – 20, 1985.	☐

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	12228487
Filing Date	2008-08-13
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	Not Yet Assigned
Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

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FOREIGN PATENT DOCUMENTS

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	1	McSpadden, J. O., Lu, Fan and Chang, Kai, "Design and Experiments of a High-Conversion-Efficiency 5.8-GHz Rectenna," IEEE Transactions on Microwave Theory and Techniques, 46, 12, part 1, December 1998.	☐
	2	Misra and Chowdhury, "Study of Impedance and Radiation Properties of a Concentric Microstrip Triangular-Ring Antenna and Its Modeling Techniques Using FDTD Method," IEEE Transactions on Antennas and Propagation, Vol. 46, No. 4, April 1998.	☐
	3	Misra, Ita et al., "Experimental Investigations on the Impedance and Radiation Properties of a Three-Element Concentric Microstrip Antenna," Microwave and Optical Technology Letters, Vol. 11, No. 2, February 5, 1996.	☐
	4	Moheb, H., Robinson, C. and Kijesky, J., "Design & Development of Co-Polarized Ku-Band Ground Terminal System for Very Small Aperture Terminal (VSAT) Application," IEEE International Symposium on Antennas and Propagation Digest, 3, July 11-16, 1999.	☐
	5	Munson, R. et al. "Conformal Microstrip Array for a Parabolic Dish," The Twenty- Third Symposium on The USAF Antenna Research and Development Program, October 10 – 12, 1973.	☐
	6	Munson, R., "Microstrip Phased Array Antennas," The Twenty-Second Symposium on The USAF Antenna Research and Development Program, October 11 – 13, 1972.	☐
	7	Munson, R. E., "Conformal Microstrip Antennas and Microstrip Phased Arrays," IEEE Trans. Antennas Propagat., vol. Ap-22, p. 74, January 1974.	☐
	8	Mushiake, Yasuto, Self-Complementary Antennas: Principle of Self- Complementarity for Constant Impedance, London, Springer-Verlag London Limited, 1996.	☐
	9	Nadan, T. Le, Coupez, J. P., Toutain, S. and Person, C., "Integration of an Antenna/Filter Device, Using a Multi-Layer, Multi-Technology Process," 28th European Microwave Conference, Volume 1, October 1998.	☐
	10	Nagai, Kiyoshi, Mikuni, Yoshihiko and Iwasaki, Hisao, "A Mobile Radio Antenna System Having a Self-Diplexing Function," IEEE Transactions on Vehicular Technology, 28, 4, November 1979.	☐
	11	Nakano and Vichien, "Dual-Frequency Square Patch Antenna with Rectangular Notch," Electronics Letters, Vol. 25 No. 16, August 3, 1989.	☐

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	12	Nishikawa, T., Ishikawa, Y., Hattori, J. and Wakino, K. "Dielectric Receiving Filter with Sharp Stopband Using an Active Feedback Resonator Method for Cellular Base Stations," IEEE Transactions on Microwave Theory and Techniques, 37, 12, December 1989.	☐
	13	Photos of Nokia 3210 product (1999 or earlier)	☐
	14	Photos of Nokia 8210 product (1999 or earlier)	☐
	15	Photos of Nokia 8260 product (1999 or earlier)	☐
	16	Photos of Nokia 8265 product (1999 or earlier)	☐
	17	Photos of Nokia 8810 product (1998 or earlier)	☐
	18	Photos of Nokia 8850 product (1999 or earlier)	☐
	19	Photos of Nokia 8860 product (1999 or earlier)	☐
	20	Omar et al., "A New Broad-band Dual-Frequency Coplanar Waveguide Fed Slot- Antenna," IEEE, 1999.	☐
	21	Ou, J. D. et al., "An Analysis of Annular, Annular Sector, and Circular Sector Microstrip Antennas," 1981 Antenna Applications Symposium, September 23 – 25, 1981.	☐
	22	Pan, S. and Hsu, W., "Single-Feed Dual-Frequency Microstrip Antenna with Two Patches," IEEE, 1999.	☐

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

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	23	Paschen, D.A. & Mayes, P.E., "Structural Stropband Elimination with the Monopole-Slot Antenna," 1982 Antenna Applications Symposium, September 22 – 24, 1982.	☐
	24	Paschen, D.A., "Broadband Microstrip Matching Techniques," 1983 Antenna Applications Symposium, September 21 – 23, 1983.	☐
	25	Phelan, H.R., "A Wide-Band Parallel-Connected Balun," The Eighteenth Symposium on The USAF Antenna Research and Development Program, October 15 – 17, 1968.	☐
	26	Pozar, David M., Microwave Engineering, Reading, MA, Addison-Wesley, 1990.	☐
	27	Pribetich, "QuasiFractal Planar Microstrip Resonators for Microwave Circuits," Microwave and Optical Technology Letters, Vol. 21, No. 6 (June 20, 1999).	☐
	28	Puente, C., Romeu, J., Pous, R., Garcia, X. and Benitez, F., "Fractal Multiband Antenna Based on the Sierpinski Gasket," Electronics Letters, 32, 1, January 4, 1996.	☐
	29	Puente, C., Romeu, J., Bartoleme, R. and Pous, R., "Perturbation of the Sierpinski Antenna to Allocate Operating Bands," Electronics Letters, 32, 24, November 21, 1996.	☐
	30	Puente-Baliarda, "On the Behavior of the Sierpinski Multiband Fractal Antenna," IEEE Transactions on Antennas and Propagation, Vol. 46, No. 4 (April 1998).	☐
	31	Rensh, "Broadband Microstrip Antenna," Proceedings of the Moscow International Conference on Antenna Theory and Tech. 1998, Vol. 28, pp. 420-423 (Sept. 22, 1998).	☐
	32	Photos of RIM 857 product (at least as early as 2000) and SAR report from FCC	☐
	33	Photos of RIM 957 product (at least as early as 2000)	☐

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	34	Rockwell B-1B Lancer <http://home.att.net/~jbaugher2/newb1_2.html> (last visited February 17, 2010).	☐
	35	Rosa, J. et al., "A Wide Angle Circularly Polarized Omnidirectional Array Antenna," The Eighteenth Symposium on The USAF Antenna Research and Development Program, October 15 – 17, 1968.	☐
	36	Rotman, W., "Problems Encountered in the Design of Flush-Mounted Antennas For High Speed Aircraft," The Second Symposium on the USAF Antenna Research and Development Program, October 19-23, 1952.	☐
	37	Rowell and Murch, "A Compact PIFA Suitable for Dual-Frequency 900/1800-MHz Operation," IEEE Transactions on Antennas and Propagation, Vol. 46, No. 4, April 1998.	☐
	38	Rowell, "A Capacitating Loaded PIFA for Compact Mobile Telephone Handsets," IEEE Transactions on Antennas and Propagation, 45, 5, May 1997.	☐
	39	Rudge, A. W., Milne, K., Olver, A. D. and Knight P., (eds.), The Handbook of Antenna Design, Volumes 1 and 2, London, Peter Peregrinus Ltd., 1986.	☐
	40	Rumsey, Victory H., Frequency Independent Antennas, New York, Academic Press, 1966. Stang, Abstracts of the 12th Annual Symposium (Oct.16–19, 1962).	☐
	41	Sanchez-Hernandez, D. & Robertson, I. D., "Analysis and Design of a Dual-Band Circularly Polarized Microstrip Patch Antenna," IEEE Transactions on Antennas and Propagation, 43, 2, February 1995. The Glen L. Martin Company, "Antennas for USAF B-57 Series Bombers" The Second Symposium on the USAF Antenna Research and Development Program, October 19-23, 1952.	☐
	42	Sandlin, B.S., Terzuoli, A.J., "A Genetic Antenna Design for Improved Radiation Over Earth," Program for 1997 Antenna Applications Symposium (Allerton Conference Proceedings), September 17-18, 1997.	☐
	43	Saunders, Simon R., Antennas and Propagation for Wireless Communication Systems, Chichester, John Wiley & Sons, Ltd., 1999.	☐
	44	Scharfman, W., et al. "Telemetry Antennas for High-Altitude Missiles," The Eighth Symposium on The USAF Antenna Research and Development Program, October 20 – 24, 1958.	☐

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

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	45	Schaubert, Chang and Wunsch, "Measurement of Phased Array Performance at Arbitrary Scan Angles," presented at the 1994 Antenna Applications Symposium on September 21, 1994.	☐
	46	Seavy, J. et al., "C-Band Paste-On and Floating Ring Reflector Antennas," The Twenty-Third Symposium on The USAF Antenna Research and Development Program, October 10 – 12, 1973.	☐
	47	Shenoy, A., Chalmers, H., Carpenter, E., Bonetti, R. and Wong, A., "Notebook Satcom Terminal Technology Development," Tenth International Conference on Digital Satellite Communications, May 15-19, 1995.	☐
	48	Shibagaki, N. Sakiyama, K. and Hikita, M., "SAW Antenna Duplexer Module Using SAW-Resonator-Coupled Filter for PCN System," 1998 IEEE Ultrasonics Symposium, 1, October 5-8, 1998.	☐
	49	Shibagaki, N., Sakiyama, K. and Hikita, M. "Miniature SAW Antenna Duplexer Module for 1.9 GHz PCN Systems Using SAW-Resonator-Coupled Filters," 1998 IEEE Ultrasonics Symposium, 2, June 7-12, 1998.	☐
	50	Shimoda, R.Y., "A Variable Impedance Ratio Printed Circuit Balun," 1979 Antenna Applications Symposium, September 26 – 18, 1979.	☐

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/H.N./	1	5841402		1998-11-24	DIAS, D.	
/H.N./	2	7205954	B2	2007-04-17	YAMAGAJO	
/H.N./	3	7202821	B2	2007-04-10	FUJIKAWA	

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/H.N./	1	20060135090	A1	2006-06-22	ANNAMAA, P.	
/H.N./	2	20060176225	A1	2006-08-10	ANNAMAA, P.	
/H.N./	3	20040147297	A1	2004-07-29	MIKKOTA, J.	

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Docket No. 47005-P018WUSC1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jaume Anguera Pros et al.

Application No. 12/228,487 | Confirmation No. 6222

Filed: August 13, 2008 | Art Unit: 2821

For: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES | Examiner: H. V. Nguyen

AMENDMENT IN RESPONSE TO NON-FINAL OFFICE ACTION UNDER 37 C.F.R. 1.111

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

INTRODUCTORY COMMENTS

In response to the Office Action dated August 26, 2010, please amend the above-identified U.S. patent application as follows:

Amendments to the Specification begin on page 2 of this paper.

Amendments to the Claims are reflected in the listing of claims which begins on page 3 of this paper.

Remarks/Arguments begin on page 12 of this paper.

AMENDMENTS TO THE Specification

Please amend the paragraph after the title of the invention as follows:

This patent application is a continuation of U.S. Patent Application No. 10/584,442, filed on July 18, 2006 as a national stage filing of PCT/EP2005/000880. PCT/EP2005/000880 is a continuation-in-part of PCT/EP2002/014706. U.S. Patent Application No. 10/584,442 claims priority from, and incorporates by reference the entire disclosure of U.S. Provisional Patent Application No. 60/540,450, filed on January 30, 2004. U.S. Patent Application No. 10/584,442, International Patent Application PCT/EP2005/000880, and U.S. Provisional Patent Application No. 60/540,450 are incorporated herein by reference.

AMENDMENTS TO THE CLAIMS

1-15. (CANCELED)

16. (NEW) A mobile communication device, comprising:

a device housing;

a printed circuit board, the printed circuit board comprising:

a ground plane layer;

a feeding point;

a communication circuitry, the communication circuitry being mounted on the printed circuit board;

wherein the communication circuitry is coupled to the feeding point and to the ground plane layer;

a multi-band antenna capable of operating at multiple frequency bands, the multi-band antenna including an antenna element;

wherein the antenna element operates in cooperation with the ground plane layer;

the antenna element comprising:

a common conductor;

a first radiating arm connected to the common conductor;

a second radiating arm connected to the common conductor;

wherein the common conductor includes a feeding port, the feeding port being coupled to the feeding point;

wherein at least a portion of the first radiating arm and at least a portion of the second radiating arm are arranged on different planes;

wherein the first radiating arm is at least partially shaped according to a grid-dimension curve; and

wherein the printed circuit board, the communication circuitry, and the multi-band antenna are arranged inside the device housing.

17. (NEW) The mobile communication device according to claim 16, wherein the first radiating arm comprises a first plurality of segments;

wherein each segment of the first plurality of segments is smaller than 1/10 of a lowest operating free-space wavelength of the multi-band antenna;

wherein the segments are spatially arranged such that each pair of adjacent segments forms a corner; and

wherein no two adjacent and connected segments form another longer straight segment; and wherein none of said segments intersect with another segment other than to form a closed loop.

18. (NEW) The mobile communication device according to claim 17, wherein the first plurality of segments comprises at least one curved segment.

19. (NEW) The mobile communication device according to claim 17, wherein the first plurality of segments comprises at least ten segments.

20. (NEW) The mobile communication device according to claim 17, wherein the second radiating arm comprises a second plurality of segments;

wherein each segment of the second plurality of segments is smaller than 1/10 of a lowest operating free-space wavelength of the multi-band antenna;

wherein the segments are spatially arranged such that each pair of adjacent segments forms a corner; and

wherein no two adjacent and connected segments form another longer straight segment; and wherein none of said segments intersect with another segment other than to form a closed loop.

21. (NEW) The mobile communication device according to claim 20, wherein the first plurality of segments comprises more segments than the second plurality of segments.

22. (NEW) The mobile communication device according to claim 16, wherein the grid-dimension curve has a grid dimension larger than 1.3.

23. (NEW) The mobile communication device according to claim 16, wherein the grid-dimension curve has a grid dimension larger than 1.5.

24. (NEW) The mobile communication device according to claim 16, wherein the second radiating arm is at least partially shaped according to a second grid-dimension curve.

25. (NEW) The mobile communication device according to claim 24, wherein the grid-dimension curve and the second grid-dimension curve have different lengths.

26. (NEW) The mobile communication device according to claim 24, wherein the grid-dimension curve and the second grid-dimension curve have different grid dimensions.

27. (NEW) The mobile communication device according to claim 16, wherein an orthogonal projection of a footprint of the antenna element on a plane of the printed circuit board overlaps the ground plane layer in less than 50% of an area of said footprint.

28. (NEW) The mobile communication device according to claim 16, comprising:

a dielectric mounting structure having a plurality of surfaces;

wherein at least a portion of the first radiating arm is arranged on a first surface of said plurality of surfaces; and

wherein at least a portion of the second radiating arm is arranged on a second surface of said plurality of surfaces, the second surface being different from the first surface.

29. (NEW) The mobile communication device according to claim 28, wherein the first surface and the second surface are opposite surfaces of the dielectric mounting structure.

30. (NEW) A mobile communication device, comprising:

a device housing;

a printed circuit board, the printed circuit board comprising:

a ground plane layer;

a feeding point;

a communication circuitry, the communication circuitry being mounted on the printed circuit board;

wherein the communication circuitry is coupled to the feeding point and to the ground plane layer;

a multi-band antenna capable of operating at multiple frequency bands, the multi-band antenna including an antenna element;

wherein the antenna element is coupled to the feeding point and operates in cooperation with the ground plane layer; the antenna element comprising:

a first conductor, the first conductor comprising a first radiating arm having a grid-dimension section shaped according to a grid-dimension curve;

a second conductor arranged at a predetermined distance from the first conductor and electromagnetically coupled to the first conductor, the second conductor comprising a planar section; and

wherein the printed circuit board, the communication circuitry, and the multi-band antenna are arranged inside the device housing.

31. (NEW) The mobile communication device according to claim 30, wherein the first conductor and the second conductor are electrically connected.

32. (NEW) The mobile communication device according to claim 31, wherein the antenna element comprises a connecting portion that connects the first radiating arm and the planar section.

33. (NEW) The mobile communication device according to claim 32, wherein a width of the grid-dimension section is smaller than a width of the planar section.

34. (NEW) The mobile communication device according to claim 30, wherein the grid-dimension curve features a grid dimension larger than 1.3.

35. (NEW) The mobile communication device according to claim 30, wherein the grid-dimension curve comprises at least ten connected segments;

wherein said segments are each smaller than 1/10 of a lowest operating free-space wavelength of the multi-band antenna;

wherein the segments are spatially arranged such that no two adjacent and connected segments form another longer straight segment;

wherein none of said segments intersect with another segment other than to form a closed loop;

wherein each pair of adjacent segments forms a corner; and

wherein any portion of the grid-dimension curve that is periodic along a fixed straight direction of space is defined by a non-periodic curve that includes at least ten connected segments in which no two adjacent and connected segments define a straight longer segment.

36. (NEW) The mobile communication device according to claim 30, wherein the multi-band antenna comprises:

a dielectric mounting structure having a plurality of surfaces;

wherein at least a portion of the first radiating arm is arranged on a first surface of said plurality of surfaces; and

wherein at least a portion of the second conductor is arranged on a second surface of said plurality of surfaces, the second surface being different from the first surface.

37. (NEW) The mobile communication device according to claim 36, wherein the grid-dimension section is arranged on the first surface; and

wherein the planar section is arranged on the second surface.

38. (NEW) The mobile communication device according to claim 36, wherein the first surface and the second surface are two opposite surfaces of the dielectric mounting structure.

39. (NEW) The mobile communication device according to claim 36, wherein the first surface and the second surface are substantially parallel.

40. (NEW) The mobile communication device according to claim 30, wherein the antenna element further comprises:

a common conductor;

a second radiating arm connected to the common conductor; and

wherein the first radiating arm is connected to the common conductor.

41. (NEW) The mobile communication device according to claim 40, wherein the second radiating arm and the grid-dimension section of the first radiating arm lie on a common surface.

42. (NEW) The mobile communication device according to claim 40, wherein the grid-dimension section of the first radiating arm extends away from the common conductor along a first direction; and

wherein the second radiating arm extends away from the common conductor along a second direction, the second direction being substantially parallel to the first direction.

43. (NEW) The mobile communication device according to claim 42, wherein the antenna element comprises a connecting portion that connects the grid-dimension section and the planar section; and

wherein the planar section extends away from the connection portion along a direction substantially opposite to the first direction.

44. (NEW) The mobile communication device according to claim 40, wherein the second radiating arm comprises a substantially straight section.

45. (NEW) The mobile communication device according to claim 40, wherein the second radiating arm comprises a second grid-dimension section, the second grid-dimension section being shaped according to a second grid-dimension curve.

46. (NEW) A mobile communication device, comprising:

a device housing;

a printed circuit board, the printed circuit board comprising:

a ground plane layer;

a feeding point;

a communication circuitry, the communication circuitry being mounted on the printed circuit board;

wherein the communication circuitry is coupled to the feeding point and to the ground plane layer;

a multi-band antenna capable of operating at multiple frequency bands, the multi-band antenna including:

a dielectric mounting structure having a plurality of surfaces;

an antenna element, the antenna element being coupled to the feeding point and operating in cooperation with the ground plane layer;

wherein the antenna element comprises a first radiating arm arranged on two or more surfaces of the plurality of surfaces of the dielectric mounting structure;

the first radiating arm comprising:

a first section shaped according to a grid-dimension curve;

a second section connected to the grid-dimension section, the second section having a width different from a width of the first section; and

wherein the printed circuit board, the communication circuitry, and the multi-band antenna are arranged inside the device housing.

47. (NEW) The mobile communication device according to claim 46, wherein the first section is arranged on a first surface of said plurality of surfaces; and

wherein the second section is arranged on a second surface of said plurality of surfaces, the second surface being different from the first surface.

48. (NEW) The mobile communication device according to claim 47, wherein the first surface and the second surface are opposite surfaces of the dielectric mounting structure.

49. (NEW) The mobile communication device according to claim 48, wherein the first surface and the second surface are substantially parallel surfaces spaced by a predetermined distance.

50. (NEW) The mobile communication device according to claim 46, wherein the first section extends along a first direction and the second section extends along a second direction, the second direction being different from the first direction.

51. (NEW) The mobile communication device according to claim 50, wherein the second direction is substantially opposite to the first direction.

52. (NEW) The mobile communication device according to claim 46, wherein the antenna element further comprises:

a common conductor;

a second radiating arm;

wherein each of the first radiating arm and the second radiating arm is connected to the common conductor; and

wherein the second radiating arm is arranged on at least one surface of the plurality of surfaces of the dielectric mounting structure.

53. (NEW) The mobile communication device according to claim 52, wherein said at least one surface is one of the two or more surfaces on which the first radiating arm is arranged.

54. (NEW) The mobile communication device according to claim 53, wherein the first section of the first radiating arm is arranged on said at least one surface, so that said first section and the second radiating arm are on a common surface of the plurality of surfaces of the dielectric mounting structure.

55. (NEW) The mobile communication device according to claim 52, wherein the second radiating arm has a uniform width.

56. (NEW) The mobile communication device according to claim 46, wherein an orthogonal projection of a footprint of the antenna element on a plane of the printed circuit board overlaps the ground plane layer in less than 50% of an area of said footprint.

57. (NEW) The mobile communication device according to claim 52, wherein the second radiating arm comprises a plurality of segments.

58. (NEW) The mobile communication device according to claim 52, wherein the second radiating arm is shaped according to a second grid-dimension curve.

59. (NEW) The mobile communication device according to claim 52, wherein the first section of the first radiating arm is connected to the common conductor and extends away from the common conductor along a first direction;

wherein the second section of the first radiating arm is connected to the first section and extends along a second direction; and

wherein the second radiating arm extends away from the common conductor along a direction substantially opposite to the second direction.

60. (NEW) The mobile communication device according to claim 46, wherein the mobile communication device operates as one of a personal digital assistant and a cellular telephone.

REMARKS

Claims 16-60 are currently pending in the application. New claims 16-60 have been added. Claims 1-15 have been canceled. Applicant respectfully submits that no new matter has been added. Applicant respectfully requests reconsideration of the application in view of the foregoing amendments and the following remarks.

Claims 1-15 stand rejected on the grounds of 35 U.S.C. 101 double patenting as claiming the same invention as that of claims 1-20 of U.S. Patent No. 7,423,592. Claims 1-15 have been canceled, thus rendering the 35 U.S.C. 101 double patenting rejection thereof moot.

In view of the above amendment, Applicant respectfully submits that the present application is in condition for allowance. A Notice to that effect is respectfully requested.

Dated: December 20, 2010

Respectfully submitted,

Electronic signature: /Shoaib A. Mithani/
Shoaib A. Mithani
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WINSTEAD PC
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Electronic Patent Application Fee Transmittal

Application Number:	12228487
Filing Date:	13-Aug-2008
Title of Invention:	Multi-band monopole antennas for mobile communications devices
First Named Inventor/Applicant Name:	Jaume Anguera Pros
Filer:	Shoaib Amirali Mithani
Attorney Docket Number:	47005-P018WUSC1

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Claims in excess of 20	1202	25	52	1300
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 1 month with $0 paid	1251	1	130	130
Miscellaneous:				
		Total in USD ($)		**1430**

Electronic Acknowledgement Receipt	
EFS ID:	9070650
Application Number:	12228487
International Application Number:	
Confirmation Number:	6222
Title of Invention:	Multi-band monopole antennas for mobile communications devices
First Named Inventor/Applicant Name:	Jaume Anguera Pros
Customer Number:	61060
Filer:	Shoaib Amirali Mithani
Filer Authorized By:	
Attorney Docket Number:	47005-P018WUSC1
Receipt Date:	20-DEC-2010
Filing Date:	13-AUG-2008
Time Stamp:	11:10:35
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$1430
RAM confirmation Number	9367
Deposit Account	232426
Authorized User	
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Document Number	**Document Description**	**File Name**	**File Size(Bytes)/ Message Digest**	**Multi Part /.zip**	**Pages (if appl.)**
1	Amendment/Req. Reconsideration-After Non-Final Reject	47005P018Response.pdf	106672 3be6230a0f861ebc3309505 1f911cf1d6692ddd8	no	12
Warnings:					
Information:					
2	Fee Worksheet (PTO-875)	fee-info.pdf	31661 bb2bfc05d34dec4407f6c48d637e0bc8a2487497	no	2
Warnings:					
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If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
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PATENT AND TRADEMARK OFFICE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	12228487
Filing Date	2008-08-13
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	Nguyen, Hoang V
Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5990849		1999-11-23	Salvail et al	
	2	5608417		1997-03-04	De Vall	
	3	4578654		1986-03-25	Tait	

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U.S.PATENT APPLICATION PUBLICATIONS

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

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NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T5
	1	Jäschke , H. ; Ribbe , J. ; Von Walter , S. Summons to attend oral proceedings in connection with the European patent application No.02808265.9 dated on June 25, 2010. European Patent Office - EPO, 2010.	☐
	2	Carpintero , F. Response to the summons to attend oral proceedings of European patent application no. 02808256.9 dated on October 21, 2010. Herrero & Asociados, 2010.	☐
	3	Mithani , S. Amendment in response to non-final office action dated August 23, 2006 of patent application no. 11/124768.	☐
	4	Mithani , S. Amendment in response to non-final office action dated February 6, 2008 of US patent application no. 11/713324.	☐
	5	Mithani , S. Amendment in response to non-final office action dated October 1, 2008 of US patent application no. 12/055748.	☐
	6	Mithani , S. Amendment in response to non-final office action dated on December 28, 2007 of US patent application no. 11/124768.	☐
	7	Mithani , S. Amendment in response to the office action dated February 21, 2007 for US patent application no. 11/124768.	☐
	8	Ho, Tan. Notice of Allowance of US patent application 11/124768 dated August 29, 2007. USPTO.	☐
	9	Ho, Tan. Notice of Allowance of US patent application no. 11/124768 dated on April 7, 2008. USPTO.	☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	10	Ho, Tan. Notice of Allowance of US patent application no. 11/124768 dated on May 18, 2006. USPTO.	☐
	11	Ho, Tan. Notice of Allowance of US patent application no. 11/713324 dated on May 14, 2008. USPTO.	☐
	12	Ho, Tan. Notice of Allowance of US patent application no. 12/055748 dated November 20, 2009. USPTO	☐
	13	Ho, Tan. Notice of Allowance of US patent application no. 12/055748 dated August 12, 2009. USPTO	☐
	14	Ho, Tan. Office Action of US pantent application no. 11/124768 dated on August 23, 2006. USPTO	☐
	15	Ho, Tan. Office Action of US patent application no. 11/124768 dated on December 28, 2007. USPTO	☐
	16	Ho, Tan. Office Action of US patent application no. 11/124768 dated on February 21, 2007. USPTO	☐
	17	Ho, Tan. Office Action of US patent application no. 11/713324 dated on February 06, 2008. USPTO	☐
	18	Ho, Tan. Office Action of US patent application no. 12/055748 dated on May 28, 2009. USPTO	☐
	19	Ho, Tan. Office Action of US patent application no. 12/055748 dated on October 1, 2008. USPTO	☐
	20	Ho, Tan. Office Action of US patent application no. 12/652794 dated on June 23, 2010. USPTO	☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	21	Mithani , S. Response to the Office Action dated May 28, 2009 of US patent application no. 12/055748. USPTO	☐
	22	Nguyen , H. Notice of Allowance of US patent application no. 10/584442 dated June 6, 2008. USPTO	☐
	23	Nguyen , H. Office Action of US patent application no. 10/584442 dated on October 29, 2007. USPTO	☐
	24	Robinson , R. Response to Office Action dated October 29, 2007 of US patent application no. US 10/584442. Winstead.	☐

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EXAMINER SIGNATURE

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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Dated: December 22, 2010 Signature: (Brenda I. Brown)

Docket No.: 47005-P018WUSC1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jaume Anguera Pros et al.

Application No.: 12/228,487 — Confirmation No.: 6222

Filed: August 13, 2008 — Art Unit: 2821

For: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES — Examiner: Nguyen, Hoang V

INFORMATION DISCLOSURE STATEMENT (IDS)

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed more than three months after the U.S. filing date, OR more than three months after the date of entry of the national stage of a PCT application, AND after the mailing date of the first Office Action on the merits, whichever occurs first, but before the mailing date of a Final Office Action or Notice of Allowance, as far as is known to the undersigned (37 CFR 1.97(c)).

12/23/2010 HVUONG1 00000044 232426 12228487
01 FC:1806 180.00 DA

5619161v.1 47005/P018WUSC1

Applicant has not submitted copies of each cited U.S. patent and U.S. patent application in accordance with 37 CFR 1.98(a)(2). Applicant submits herewith copies of any cited non-patent documents and foreign patent documents in accordance with 37 CFR 1.98(a)(2).

In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing of this Information Disclosure Statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

Please charge our Deposit Account No. 23-2426 in the amount of $180.00 covering the fee set forth in 37 CFR 1.17(p). The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 23-2426, under Order No. 47005-P018WUSC1.

Dated: December 22, 2010

Respectfully submitted,

By_____
Shoaib A. Mithani
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Attorneys For Applicant

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61060 7590 01/21/2011

WINSTEAD PC
P.O. BOX 50784
DALLAS, TX 75201

EXAMINER	
NGUYEN, HOANG V	
ART UNIT	PAPER NUMBER
2821	

DATE MAILED: 01/21/2011

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/228,487	08/13/2008	Jaume Anguera Pros	47005-P018WUSC1	6222

TITLE OF INVENTION: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1510	$300	$0	$1810	04/21/2011

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

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B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

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PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

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Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
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Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

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(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/228,487	08/13/2008	Jaume Anguera Pros	47005-P018WUSC1	6222

TITLE OF INVENTION: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1510	$300	$0	$1810	04/21/2011

EXAMINER	ART UNIT	CLASS-SUBCLASS
NGUYEN, HOANG V	2821	343-7000MS

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

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4a. The following fee(s) are submitted:

❑ Issue Fee

❑ Publication Fee (No small entity discount permitted)

❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**

❑ A check is enclosed.

❑ Payment by credit card. Form PTO-2038 is attached.

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

❑ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

❑ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/228,487	08/13/2008	Jaume Anguera Pros	47005-P018WUSC1	6222

61060 7590 01/21/2011

WINSTEAD PC
P.O. BOX 50784
DALLAS, TX 75201

EXAMINER	
NGUYEN, HOANG V	
ART UNIT	PAPER NUMBER
2821	

DATE MAILED: 01/21/2011

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 291 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 291 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

Notice of Allowability	Application No.	Applicant(s)	
	12/228,487	PROS ET AL.	
	Examiner	Art Unit	
	HOANG V. NGUYEN	2821	

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

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *amendment filed on 12/20/2010*.

2. ☒ The allowed claim(s) is/are *16-60*.

3. ☐ 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 the:
      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)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 12/22/2010
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/Hoang V Nguyen/
Primary Examiner, Art Unit 2821

Allowable Subject Matter

1. Claims 16-60 are allowed.

2. The following is an examiner's statement of reasons for allowance:

Regarding claim 16, none of the prior art of record, either taken alone or in combination, fairly teaches or suggests a mobile communication device comprising, in combination with all other limitations in the claim, a multi-band antenna capable of operating at multiple frequency bands, the multi-band antenna including an antenna element; wherein the antenna element operates in cooperation with the ground plane layer; the antenna element comprising a common conductor; a first radiating arm connected to the common conductor; a second radiating arm connected to the common conductor; wherein the common conductor includes a feeding port, the feeding port being coupled to the feeding point; wherein at least a portion of the first radiating arm and at least a portion of the second radiating arm are arranged on different planes; wherein the first radiating arm is at least partially shaped according to a grid-dimension curve.

Claims 17-29 are allowed for depending on claim 16.

Regarding claim 30, none of the prior art of record, either taken alone or in combination, fairly teaches or suggests a mobile communication device comprising, in combination with all other limitations in the claim, a multi-band antenna capable of operating at multiple frequency bands, the multi-band antenna including an antenna element; wherein the antenna element is coupled to the feeding point and operates in cooperation with the ground plane layer; the antenna element comprising a first conductor, the first conductor comprising a first radiating arm having a grid-dimension section shaped according to a grid-dimension curve; a second conductor

arranged at a predetermined distance from the first conductor and electromagnetically coupled to the first conductor, the second conductor comprising a planar section.

Claims 31-45 are allowed for depending on claim 30.

Regarding claim 46, none of the prior art of record, either taken alone or in combination, fairly teaches or suggests a mobile communication device comprising, in combination with all other limitations in the claim, a multi-band antenna capable of operating at multiple frequency bands, the multi-band antenna including a dielectric mounting structure having a plurality of surfaces; an antenna element, the antenna element being coupled to the feeding point and operating in cooperation with the ground plane layer; wherein the antenna element comprises a first radiating arm arranged on two or more surfaces of the plurality of surfaces of the dielectric mounting structure; the first radiating arm comprising a first section shaped according to a grid-dimension curve; a second section connected to the grid-dimension section, the second section having a width different from a width of the first section; and wherein the printed circuit board, the communication circuitry, and the multi-band antenna are arranged inside the device housing.

Claims 47-60 are allowed for depending on claim 46.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Inquiry

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, Jacob Y. Choi can be reached on (571) 272-2367. 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

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BIB DATA SHEET

CONFIRMATION NO. 6222

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
12/228,487	08/13/2008 RULE	343	2821	47005-P018WUSC1

APPLICANTS

Jaume Anguera Pros, Vinaros, SPAIN;
Carles Puente Baliarda, Barcelona, SPAIN;

**** CONTINUING DATA **************************

This application is a CON of 10/584,442 07/18/2006 PAT 7,423,592 /HN/
which is a 371 of PCT/EP2005/000880 01/28/2005
and claims benefit of 60/540,450 01/30/2004

**** FOREIGN APPLICATIONS ************************** None /HN/

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ****

09/02/2008

Foreign Priority claimed	35 USC 119(a-d) conditions met	Verified and Acknowledged	Met after Allowance	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
☐ Yes ☑ No	☐ Yes ☑ No	/HOANG V NGUYEN/ Examiner's Signature	☐ HN Initials	SPAIN	17	~~15~~ 45	~~2~~ 3

ADDRESS

WINSTEAD PC
P.O. BOX 50784
DALLAS, TX 75201
UNITED STATES

TITLE

Multi-band monopole antennas for mobile communications devices

FILING FEE RECEIVED		
2460	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

BIB (Rev. 05/07).

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12228487	PROS ET AL.
	Examiner	Art Unit
	HOANG V NGUYEN	2821

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	08/23/2010	01/10/2011							
	1	✓	-							
	2	✓	-							
	3	✓	-							
	4	✓	-							
	5	✓	-							
	6	✓	-							
	7	✓	-							
	8	✓	-							
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	11	✓	-							
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	13	✓	-							
	14	✓	-							
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16	31		=							
17	32		=							
18	33		=							
19	34		=							
20	35		=							
21	36		=							

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12228487	PROS ET AL.
	Examiner	Art Unit
	HOANG V NGUYEN	2821

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	08/23/2010	01/10/2011							
22	37		=							
23	38		=							
24	39		=							
25	40		=							
26	41		=							
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26	44		=							
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33	48		=							
34	49		=							
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36	51		=							
37	52		=							
38	53		=							
39	54		=							
40	55		=							
41	56		=							
42	57		=							
43	58		=							
44	59		=							
45	60		=							

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12228487	PROS ET AL.
	Examiner	Art Unit
	HOANG V NGUYEN	2821

SEARCHED			
Class	Subclass	Date	Examiner
343	700MS, 702, 895, 833, 834	1/10/11	HN

SEARCH NOTES		
Search Notes	Date	Examiner
see EAST search history	1/10/11	HN

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner
343	700MS, 895, 702	1/10/11	HN

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12228487	PROS ET AL.
	Examiner	Art Unit
	HOANG V NGUYEN	2821

ORIGINAL		INTERNATIONAL CLASSIFICATION										
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED					
343	700MS	H	0	1	Q	1 / 38 (2006.0)						
CROSS REFERENCE(S)		H	0	1	Q	1 / 36 (2006.0)						
		H	0	1	Q	1 / 24 (2006.01.01)						

CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				
343	895	702			

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1	2	17	18	33	34	49								
	2	3	18	19	34	35	50								
	3	4	19	20	35	36	51								
	4	5	20	21	36	37	52								
	5	6	21	22	37	38	53								
	6	7	22	23	38	39	54								
	7	8	23	24	39	40	55								
	8	9	24	25	40	41	56								
	9	10	25	28	41	42	57								
	10	11	26	29	42	43	58								
	11	12	27	30	43	44	59								
	12	13	28	26	44	45	60								
	13	14	29	27	45										
	14	15	30	31	46										
	15	16	31	32	47										
1	16	17	32	33	48										

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	45	
/HOANG V NGUYEN/ Primary Examiner.Art Unit 2821	01/10/2011	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	10

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	638144	antenna	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/01/10 11:49
L2	695354	pcb or (circuit adj board)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/01/10 11:49
L3	51199	ground adj plane	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/01/10 11:49
L4	2742530	feed$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/01/10 11:49
L5	36	grid adj dimension adj curve	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/01/10 11:50
L6	468	space adj filling adj curve	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/01/10 11:51

L7	470	(5 or 6)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/01/10 11:51
L8	71	1 and 2 and 3 and 4 and 7	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/01/10 11:51

1/10/2011 11:52:36 AM
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PTO/SB/08a (01-10)
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OPIPE 1123
DEC 22 2010
PATENT & TRADEMARK OFFICE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	12228487
Filing Date	2008-08-13
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	Nguyen, Hoang V
Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5990849		1999-11-23	Salvail et al	
	2	5608417		1997-03-04	De Vall	
	3	4578654		1986-03-25	Tait	

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					

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FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2]	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487 12228487 - GAU: 2821
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

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NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T5
	1	Jäschke , H. ; Ribbe , J. ; Von Walter , S. Summons to attend oral proceedings in connection with the European patent application No.02808265.9 dated on June 25, 2010. European Patent Office - EPO, 2010.	☐
	2	Carpintero , F. Response to the summons to attend oral proceedings of European patent application no. 02808256.9 dated on October 21, 2010. Herrero & Asociados, 2010.	☐
	3	Mithani , S. Amendment in response to non-final office action dated August 23, 2006 of patent application no. 11/124768.	☐
	4	Mithani , S. Amendment in response to non-final office action dated February 6, 2008 of US patent application no. 11/713324.	☐
	5	Mithani , S. Amendment in response to non-final office action dated October 1, 2008 of US patent application no. 12/055748.	☐
	6	Mithani , S. Amendment in response to non-final office action dated on December 28, 2007 of US patent application no. 11/124768.	☐
	7	Mithani , S. Amendment in response to the office action dated February 21, 2007 for US patent application no. 11/124768.	☐
	8	Ho, Tan. Notice of Allowance of US patent application 11/124768 dated August 29, 2007. USPTO.	☐
	9	Ho, Tan. Notice of Allowance of US patent application no. 11/124768 dated on April 7, 2008. USPTO.	☐

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	10	Ho, Tan. Notice of Allowance of US patent application no. 11/124768 dated on May 18, 2006. USPTO.	☐
	11	Ho, Tan. Notice of Allowance of US patent application no. 11/713324 dated on May 14, 2008. USPTO.	☐
	12	Ho, Tan. Notice of Allowance of US patent application no. 12/055748 dated November 20, 2009. USPTO	☐
	13	Ho, Tan. Notice of Allowance of US patent application no. 12/055748 dated August 12, 2009. USPTO	☐
	14	Ho, Tan. Office Action of US pantent application no. 11/124768 dated on August 23, 2006. USPTO	☐
	15	Ho, Tan. Office Action of US patent application no. 11/124768 dated on December 28, 2007. USPTO	☐
	16	Ho, Tan. Office Action of US patent application no. 11/124768 dated on February 21, 2007. USPTO	☐
	17	Ho, Tan. Office Action of US patent application no. 11/713324 dated on February 06, 2008. USPTO	☐
	18	Ho, Tan. Office Action of US patent application no. 12/055748 dated on May 28, 2009. USPTO	☐
	19	Ho, Tan. Office Action of US patent application no. 12/055748 dated on October 1, 2008. USPTO	☐
	20	Ho, Tan. Office Action of US patent application no. 12/652794 dated on June 23, 2010. USPTO	☐

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487 12228487 - GAU: 2821
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	21	Mithani , S. Response to the Office Action dated May 28, 2009 of US patent application no. 12/055748. USPTO	☐
	22	Nguyen , H. Notice of Allowance of US patent application no. 10/584442 dated June 6, 2008. USPTO	☐
	23	Nguyen , H. Office Action of US patent application no. 10/584442 dated on October 29, 2007. USPTO	☐
	24	Robinson , R. Response to Office Action dated October 29, 2007 of US patent application no. US 10/584442. Winstead.	☐

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature	/Hoang Nguyen/	Date Considered	01/07/2011

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99**)	Application Number	12222848
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20030184482	A1	2003-10-02	BETTIN	
	2	20020000940	A1	2002-01-03	MOREN	

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FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	02078123	WO	A1	2002-10-03	TELEFONAKTIEBOLAGET L.M. ERICSSON		☐
	2	0003451	WO	A1	1/2000 ~~2002-01-20~~	MATECO AB		☐

Change(s) applied to document.
/M.A.H./
3/~~FI~~/2011

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

	31	6195048		2001-02-27	CHIBA	
	32	6198442		2001-03-06	RUTKOWSKI	
	33	6201501		2001-03-13	ARKKO	
	34	6204826		2001-03-20	RUTKOWSKI	
Change(s) applied to document, /M.A.H./ 3/28/2011	35	6211826		4/2001 ~~2001-03-20~~	AOKI	
	36	6215474		2001-04-10	SHAH	
	37	6236366		2001-05-22	YAMAMOTO	
	38	6239765		2001-05-29	JOHNSON	
	39	6243592		2001-06-05	NAKADA	
	40	6259407		2001-07-10	TRAN	
	41	6266538		2001-07-24	WALDRON	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

	20	5995052		1999-11-30	SADLER	
	21	6011699		2000-01-04	MURRAY	
	22	6094179		2000-07-25	DAVIDSON	
	23	6097339		2000-08-01	FILIPOVIC	
	24	6160513		2000-12-12	DAVIDSON	
	25	6122533		2000-09-19	ZHANG	
	26	6329951		2001-12-11	WEN	
	27	6140966		2000-10-31	PANKINAHO	
	28	6141540		2000-10-31	RICHARDS	
	29	6147655		2000-11-14	ROESNER	
	30	6181281		01/2001 ~~2001-06-30~~	DESCLOS	

Change(s) applied to document,
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3/28/2011

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12/228,487
	Filing Date	8-13-2008
	First Named Inventor	Pros
	Art Unit	2821
	Examiner Name	
	Attorney Docket Number	47005-P018W4SC1

(19)

	9	6281846	B1	2001-08-28	PUENTE	
	10	4123756		1978-10-31	NAGATA	
	11	5572223		1996-11-05	PHILLIPS	
	12	6384790	B2	2002-05-07	DISHART	
	13	7126537	B2	2006-10-24	COHEN	
	14	7069043	B2	2006-06-27	SAWAMURA	

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
Change(s) applied to document, /M.A.H./ 3/28/2011	1	20020140615	A1	2002-10-03	Carles et al. ~~PUENTE-BALIARDA~~	
	2	20010050637	A1	2001-12-13	AOYAMA	

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(18)

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12/228,487
	Filing Date	8-13-08
	First Named Inventor	Dros
	Art Unit	2821
	Examiner Name	
	Attorney Docket Number	47005-P018W45C1

U.S.PATENTS						
Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6343208	B1	2002-01-29	YING	
Change(s) applied to document, /M.A.H./ 3/28/2011	2	6614400	B2	9/2003 ~~2003-10-02~~	EGOROV	
	3	5248988		1993-09-28	MAKINO	
	4	5457469		1995-10-10	DIAMOND	
	5	5990838		1999-11-23	BURNS	
	6	5986610		1999-11-16	MIRON	
	7	6266023	B1	2001-07-24	NAGY	
	8	6801164	B2	2004-10-05	BIT-BABIK	

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	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7081857	B2	2006-07-25	KINNUNEN ET AL	
	2	6275198	B1	2001-08-14	KENOUN ET AL	
	3	7289072	B2	2007-10-30	SAKURAI	
	4	5943020		1999-08-24	LIEBENDOERFER ET AL	

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20070152894	A1	2007-07-05	SANZ ET AL	
	2	20070046548 ~~20070046578~~	A1	2007-03-01	PROS ET AL	

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FOREIGN PATENT DOCUMENTS

Change(s) applied to document.
/M.A.F./
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 2 of 8

Complete if Known	
Application Number	12/228,487-Conf. #6222
Filing Date	August 13, 2008
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	Not Yet Assigned
Attorney Docket Number	47005-P018WUSC1

	AV1*	US-6,882,320-B2	04-19-2005	Park et al.	
	AW1*	US-7,081,857-B2	07-25-2006	Kinnunen et al.	
	AX1*	US-2007/0103371-A1	05-10-2007	Kim et al.	
	AY1*	US-2007/0152887	07-05-2007	Castany et al.	
	AZ1*	US-2006/0028380	02-09-2006	Harano, Nobuya	
	AA2*	US-2007/0024508	02-01-2007	Lee, Hyok	
	AB2*	US-2003/0137459	07-24-2003	Kim et al.	
	AC2*	US-2007/0194997	08-23-2007	Nakanishi et al.	
	AD2*	US-2006/0033668	02-16-2006	Ryu	
	AE2*	US-2006/0170610	08-03-2006	Rabinovich et al.	
	AF2*	US-2005/0237244	10-27-2005	Annabi et al.	
	AG2*	US-6,140,975	10-31-2000	Cohen	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document: Country Code[3]-Number[4]-Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T[6]
	BA**	JP-2001-217632	08-10-2001	Matsushita Electric Ind. Co. Ltd.		√
	BB**	EP-0 884 796	12-16-1998	Matsushita Electronic Industrial C., Ltd.		
	BC**	EP-0 777 293	07-03-2002	Murata Manufacuring Co., Ltd.		
	BD**	EP-1 091 445	04-11-2001	Matsushita Electric Industrial Co., Ltd.		
	BE**	WO-01/54225	07-26-2001	Fractus, S.A.		
	BF**	WO-01/11721	02-15-2001	Allgon AB		
	BG**	GB-2 361 584	10-24-2001	Motorola Limited		
	BH**	WO-00/77884	12-21-2000	Harada Industries (Europe) Limited		
	BI**	WO-2004/~~0025778~~ 025778	03-25-2004	Fractus S.A.		
	BJ**	EP-0 986 130	03-15-2000	Siemens AG		
	BK**	EP-1 237 224	09-04-2002	Siemens AG		
	BL**	EP-1 198 027	04-17-2002	The Furukawa Electric Co., Ltd.		
	BM**	WO-01/48861	07-05-2001	Allgon AB		
	BN**	WO-02/35646	05-02-2002	Fractus-Ficosa International, UTE		
	BO**	WO-99/56345	11-04-1999	Intenna Technology AB		
	BP**	WO-96/38881	12-05-1996	Ericsson Inc.		
	BQ**	WO-01/26182	04-12-2001	Smarteq Wireless AB		
	BR**	EP-1367671	12-03-2003	Ngk Spark Plug Co., Ltd.		
	BS	WO-0235652	05-02-2002	ACE Technology		
	BT	WO-2005076409	08-18-2005	Fractus SA		

Change(s) applied to document,
/M.A.H./
3/28/2011

Examiner Signature	/Hoang Nguyen/	Date Considered	08/23/2010

5306477v.1 47005/P018WUSC1

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 8

Complete if Known	
Application Number	12/228,487-Conf. #6222
Filing Date	August 13, 2008
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	Not Yet Assigned
Attorney Docket Number	47005-P018WUSC1

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AA*	US-5,929,825	07-27-1999	Niu et al.	
	AB*	US-6,166,694	12-26-2000	Ying et al.	
	AC*	US-6,111,545	08-29-2000	Saari et al.	
	AD*	US-6,112,102	08-29-2000	Zhinong et al.	
	AE*	US-6,329,962-A1	12-11-2001	Ying et al.	
	AF*	US-20010002823-A1	06-07-2001	YING	
	AG*	US-20020080088-A1	06-27-2002	Boyle	
	AH*	US-20020175866-A1	11-28-2002	Gram	
	AI*	US-6,104,349	08-15-2000	Cohen	
	AJ*	US-6,307,511	10-23-2001	Ying et al.	
	AK*	US-20020000940-A1	01-03-2002	MOREN et al.	
	AL*	US-6,337,663	01-08-2002	Chi-Ming et al.	
	AM*	US-6,664,930-A1	12-16-2003	Wen et al.	
	AN*	US-5,870,066	02-09-1999	Asakura et al.	
	AO*	US-5,963,871	10-05-1999	Zhinong et al.	
	AP*	US-20020190904-A1	12-19-2002	Cohen	
	AQ*	US-20040027295-A1	~~01-04-2005~~ 2/2004	Huber et al.	
	AR*	US-20040095289-A1	~~05-24-2005~~ 5/2004	Bae et al.	
	AS*	US-6,445,352	09-03-2002	Cohen	
	AT*	US-20020044090-A1	04-18-2002	Bahr et al.	
	AU*	US-6,130,651	10-10-2000	Yanagisawa et al.	
	AV*	US-6,459,413-A1	10-01-2002	Tseng et al.	
	AW*	US-6,864,854-A1	03-08-2005	Dai et al.	
	AX*	US-4,123,756	10-31-1978	Nagata et al.	
	AY*	US-4,389,651	06-21-1983	Tomasky	
	AZ*	US-5,337,065	08-09-1994	Bonnet et al.	
	AA1*	US-5,572,223	11-05-1996	Phillips et al.	
	AB1*	US-5,943,020	08-24-1999	Liebendoerfer et al.	
	AC1*	US-6,271,794	08-07-2001	Geeraert et al.	
	AD1*	US-6,384,790-A1	05-07-2002	Dishart et al.	
	AE1*	US-6,822,611-A1	11-23-2004	Kontogeorgakis et al.	
	AF1*	US-6,337,667	01-08-2002	Ayala et al.	
	AG1*	US-20010050637-A1	12-13-2001	Aoyama et al.	
	AH1*	US-20030210187-A1	~~06-06-2004~~ 11/2003	Wong et al.	
	AI1*	US-20070046548	03-01-2007	Pros et al.	
	AJ1*	US-20070152894	07-05-2007	Sanz et al.	
	AK1*	US-6,950,071	09-27-2005	Wen	
	AL1*	US-20040140938	07-22-2004	Kadambi	
	AM1	US-120020149527	10-17-2002	Wen	
	AN1*	US-20040004574	01-08-2004	Wen	
	AO1*	US-7,057,560	06-06-2006	Erkocevic	
	AP1*	US-20040212545	10-28-2004	Li	
	AQ1*	US-7,126,537	10-24-2006	Cohen	
	AR1*	US-4,578,654	03-25-1986	Tait	
	AS1*	US-5,608,417	03-04-1997	de Vall	
	AT1*	US-5,990,849	11-23-1999	Salvail et al.	
	AU1*	US-7,289,072-B2	10-30-2007	Sakurai, Masanori	

Change(s) applied to document,
/M.A.H./
3/28/2011

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)
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GRAPHICS JUL 28 2010 PATENT AND TRADEMARK OFFICE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	12228487
Filing Date	2008-08-13
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	NA
Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	4827271		1989-05-02	BERNEKING, WILLIAM	
Change(s) applied to document, /M.A.H./ 3/28/2011	2	4843468		6/1989 ~~1986-07-14~~	DREWERY JOHN	
	3	5410322		1995-04-25	SONODA	
	4	5918183		1999-06-29	JANKY, JAMES M	
	5	6140975		2000-10-31	COHEN, NATHAN	
	6	7148850		2006-12-12	PUENTE, CARLES	

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear

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Request for Continued Examination (RCE) Transmittal

Address to:
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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Application Number	12/228,487-Conf. #6222
Filing Date	August 13, 2008
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	H. V. Nguyen
Attorney Docket Number	47005-P018WUSC1

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. See Instruction Sheet for RCEs (not to be submitted to the USPTO) on page 2.

1. Submission required under 37 CFR 1.114 Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

   a. [ ] Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.
      i. [ ] Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
      ii. [ ] Other _____

   b. [X] Enclosed
      i. [ ] Amendment/Reply
      ii. [ ] Affidavit(s)/Declaration(s)
      iii. [X] Information Disclosure Statement (IDS)
      iv. [ ] Other _____

2. Miscellaneous

   a. [ ] Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

   b. [ ] Other _____

3. Fees The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.

   a. [X] The Director is hereby authorized to charge the following fees, any underpayment of fees, or credit any Overpayments, to Deposit Account No. 23-2426 .
      i. [X] RCE fee required under 37 CFR 1.17(e)
      ii. [ ] Extension of time fee (37 CFR 1.136 and 1.17)
      iii. [ ] Other _____

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   810.00 DA
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   b. [ ] Check in the amount of $ _____ enclosed

   c. [ ] Payment by credit card (Form PTO-2038 enclosed)

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Signature		Date	March 30, 2011
Name (Print/Type)	Ross T. Robinson	Registration No.	47,031

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EM 018959376 US, on the date shown below in an envelope addressed to:
MS RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: March 30, 2011 Signature: (Brenda I. Brown)

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Dated: March 30, 2011 Signature: (Brenda I. Brown)

OIPE MAR 30 2011 PATENT & TRADEMARK OFFICE

Docket No.: 47005-P018WUSC1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Anguera Pros et al.

Application No.: 12/228,487 Confirmation No.: 6222

Filed: August 13, 2008 Art Unit: 2821

For: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES Examiner: H. V. Nguyen

INFORMATION DISCLOSURE STATEMENT (IDS)

MS RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08 (facsimile). It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement, pursuant to 37 CFR 1.114(c), accompanies the Request for Continued Examination (37 CFR 1.114) submitted herewith.

Applicant has not submitted copies of each cited U.S. patent and U.S. patent application in accordance with 37 CFR 1.98(a)(2). Applicant submits herewith copies of any cited non-patent documents and foreign patent documents in accordance with 37 CFR 1.98(a)(2).

In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing of this Information Disclosure Statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 23-2426, under Order No. 47005-P018WUSC1.

Dated: March 30, 2011

Respectfully submitted,

By _____
Ross T. Robinson
Registration No.: 47,031
WINSTEAD PC
P.O. Box 50784
Dallas, Texas 75201
(214) 745-5400
Attorneys For Applicant

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT & TRADEMARK OFFICE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	12228487
Filing Date	2008-08-13
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	Nguyen, Hoang V
Attorney Docket Number	47005-P018WUSC1

FORM 1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5986609		1999-11-16	Spall	
	2	4907011		1990-03-06	Kuo	
	3	7015868		2006-03-21	Puente	
	4	7123208		2006-10-17	Puente	
	5	7202822		2007-04-10	Baliarda	
	6	7312762		2007-12-25	Puente	
	7	7394432		2008-07-01	Baliarda	
	8	7397431		2008-07-08	Baliarda	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	12228487
Filing Date	2008-08-13
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	Nguyen, Hoang V
Attorney Docket Number	47005-P018WUSC1

U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20040009755		2004-01-15	Yoshida	
	2	20090109101		2009-04-30	Baliarda	

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FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	05007109	JP		1993-01-14	Yasuhiro		☐
	2	1258054	EP		2005-08-15	Puente		☐
	3	199735360	WO		1997-09-25	Ball Aerospace & Technologies Corp.		☐

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NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	Declaration of Jeffery D. Baxter - Including Exhibits regarding US patent 7411556 Defendants 20100730	☐

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	2	Dubost , G. Wideband flat dipole and short-circuit microstrip patch elements and arrays. In Handbook of microstrip antennas - Chapter 7. Peter Peregrinus Ltd. James , J. R. ; Hall , P. S. (ed.) 1989	☐
	3	NA. Nokia 8260 - FCC ID GMLNSW-4DX. April 1999.	☐
	4	Rudge, A. W. The handbook of antenna design. Peter Peregrinus, 1986.	☐
	5	Borja , C. ; Puente , C. Iterative network models to predict the performance of Sierpinski fractal antennas and networks. Antennas and Propagation Society International Symposium, 1999.	☐
	6	Campos, O. Study of multiband and miniature fractal antennas. Universitat Politècnica de Catalunya, 1998	☐
	7	Cristal , E. G. et al. Hairpin-line and hybrid hairpin-line / Half-wave parallel-coupled-line filers. IEEE Transactions on Microwave Theory and Techniques. November, 1972	☐
	8	Hohlfeld , R. G. ; Cohen N. Self-similarity and the geometric requirements for frequency independence in antennae. Fractals, 1999.	☐
	9	Jaggard , D. L. Fractal electrodynamics and modeling. Directions in electromagnetic wave modeling,1991	☐
	10	Lee , B. T. Office action for the US patent application 10/181790 dated on August 27, 2004	☐
	11	Lee , B. T. Office action for the US patent application 10/181790 dated on June 2, 2005	☐
	12	Lee , B. T. Response to office action for the US patent application 10/181790 dated on August 27, 2004	☐

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	Attorney Docket Number	47005-P018WUSC1

	13	Lee , B.T. Office action for the US patent application 10/181790 dated on March 2, 2005	☐
	14	Lee , Benny T. Office action for the US patent application 10/181790 dated on August 4, 2005	☐
	15	Maiorana , D. Amendment and response to the Office Action dated on January 23, 2004 of US patent application 10/102568	☐
	16	Mandelbrot, B. The fractal geometry of nature. Freeman and Company. 1983	☐
	17	Matthaei , George L. et al. Hairpin-comb filters for HTS and other narrow-band applications. IEEE Transactions on Microwave Theory and Techniques, August, 1997	☐
	18	Matthaei , George L. Microwave filters impedance-matching networks and coupling structures. Artech House. 1980	☐
	19	Mithani , S. Response to the Office Action dated March 12, 2007 of US patent application no. 11/021597	☐
	20	NA. International preliminary examination report of PCT/EP00/00411. European Patent Office (EPO). August, 2002	☐
	21	NA. Nokia 8290. 2010	☐
	22	NA. Office action for the Chinese patent application 01823716 dated on February 16, 2007	☐
	23	NA. Office action for the Chinese patent application 01823716 dated Setember 21, 2007	☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	24	NA. Response to the office action dated on February 16, 2007 for the Chinese patent application 01823716	☐
	25	Nguyen , H. Notice of Allowance of US patent application no. 12/347462 dated on May 18, 2009	☐
	26	Nguyen , H. Office Action of US patent application no. 12/347462 dated on October 28, 2009	☐
	27	Nguyen , H. Office Action of US patent application number 10/182635 dated December 13, 2004	☐
	28	Nguyen, H. Notice of Allowance of US patent application no. 11/110052 dated on May 30, 2006	☐
	29	Peitgen , H. ; Jürgens , H. ; Saupe , D. Chaos and Fractals: New frontiers of Science - Pag 8-9	☐
	30	Rolan Cisneros, E. International Search Report for the PCT patent application ES99/00296. OEPM. March, 2001	☐
	31	Sauer , J. Amendment and response to office action dated December 13, 2004 of US patent application no. 10/182635	☐
	32	Sauer , J. Amendment and response to office action dated October 04, 2004 of US patent application no. 10/182635	☐
	33	Sauer , J. M. Response to the office action from US patent application 10/181790 dated March 2, 2005	☐
	34	Sauer , J. M. Response to the Office Action mailed on January 26, 2006 and Advisory Action mailed on March 29, 2006 for the US patent application 10/422578	☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	35	Sauer, J.M. Response to the office action from US patent application 10/181790 dated June 2, 2005	☐
	36	Soler , J. ; Romeu , J. ; Puente , C. Mod-P Sierpinski fractal multiband antenna. Antennas and Propagation Society International Symposium, 2000	☐
	37	Tinker J. A. Response to the office action dated October 30, 2007 of US patent application no. 11/021597	☐
	38	Wimer , M. C. Office Action for the US patent application 10/422578 dated on August 23, 2007	☐
	39	Wimer , M. C. Office Action for the US patent application 10/422578 dated on January 26, 2006	☐
	40	Wimer , M. C. Office Action for the US patent application 10/422578 dated on March 12, 2007	☐
	41	Wimer , M. C. Office action for the US patent application 10/422578 dated on March 26, 2008	☐
	42	Wimer , M. C. Office Action for the US patent application 11/021597 dated on March 12, 2007	☐
	43	Wimer , M. C. Office Action for US Patent Application No 10/422578 dated on June 23, 2005	☐
	44	Wimer , M. Office action of US patent application no. 11/021597 dated October 30, 2007	☐
	45	Zhang , Dawei ; Liang , G.C. ; Shih , C.F. Narrowband lumped element microstrip filters using capacitively loaded inductors. Microwave Symposium Digest, 1995	☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	46	Defendants LG Electronics Mobilecomm USA., Inc.'s answer and counterclaim to complaint. LG Electronics Mobilecomm USA., Inc. January 10 2010	☐
	47	Defendant Pantech Wireless, INC.'S answer, affirmative defenses and counterclaims to Fractus SA' s Amended complaint. Pantech Wireless, Inc. June 4 2009	☐
	48	Defendant UTStarcom, Inc.'s answer, affirmative defenses, and counterclaims to plaintiff's amended complaint. UTStarcom, Inc. June 8 2009	☐
	49	Answer, affirmative defenses and counterclaims to the amended complaint for patent infringement on behalf of Defendant Personal Communications Devices Holdings, LLC. July 20, 2009	☐
	50	Defendant Sanyo North America Corporation's partial answer to amended complaint for patent infringement. Sanyo North America Corporation. July 20, 2009	☐

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FORM 2

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	Attorney Docket Number	47005-P018WUSC1

	1	Kyocera Communications Inc's answer, affirmative defenses and counterclaims to plantiff's amended complaint. Kyocera Communications Inc. July 21, 2009	☐
	2	Kyocera Wireless Corp's answer, affirmative defenses and counterclaims to plantiff's amended complaint. Kyocera Wireless Corp. July 21, 2009	☐
	3	Palm Inc.'s answer, affirmative defenses and counterclaims to plaintiff's amended complaint. Palm Inc. July 21, 2009	☐
	4	Defendant HTC Corporation's answer and counterclaim to plaintiff's amended complaint. HTC Corporation. September 25, 2009	☐
	5	Defendant HTC America Inc's answer and counterclaim to plaintiff's amended complaint. HTC America Inc. September 25, 2009	☐
	6	Defendants Samsung Electronics Co., Ltd.'s; Samsung Electronics Research Institute's and Samsung Semiconductor Europe GMBH' s answer; and Samsung Telecommunications America LLC' s answer and counterclaim to the amended complaint of plaintiff Fractus, SA. October 1, 2009	☐
	7	Defendants Research in Motion LTD, and Research in Motion Corporation's answers, defenses and counterclaims to plaintiff's amended complaint. October 1, 2009	☐
	8	Defendants LG Electronics Inc., LG Electronics USA, Inc., and LG Electronics Mobilecomm USA Inc. answer and counterclaim to amended complaint. October 1, 2009	☐
	9	Defendants HTC America, Inc's first amended answer and counterclaims to plaintiff's amended complaint. October 2, 2009	☐
	10	Defendants Research in Motion LTD, and Research in Motion Corporation's amended answer, defenses and counterclaims to plaintiff's amended complaint. November 24, 2009	☐
	11	Answer, affirmative defenses and counterclaims to the second amended complaint for patent infringement on behalf of Defendant Personal Communications Devices Holdings, LLC. December 17, 2009	☐

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	12	Defendant HTC America, Inc's answer and counterclaims to plaintiff's second amended complaint. December 21, 2009	☐
	13	Defendant HTC Corporation's answer and counterclaims to plaintiff's second amended complaint. December 21, 2009	☐
	14	Defendant Research in Motion LTD and Research in Motion Corporation's second answer, defenses and counterclaims to plaintiff's second amended complaint. December 21, 2009	☐
	15	Defendant Pantech Wireless, Inc's answer, affirmative defenses and counterclaims to Fractus SA's second amended complaint. December 21, 2009	☐
	16	Defendant Sanyo Electric Co. LTD's answer to second amended complaint for patent infringement. December 22, 2009	☐
	17	Defendant Sanyo North America Corporation's answer to second amended complaint for patent infringement. December 22, 2009	☐
	18	Defendant UTStarcom, Inc's answer, affirmative defenses and counterclaims to Fractus SA's second amended complaint. December 22, 2009	☐
	19	Palm, Inc's answer, affirmative defenses and counterclaims to paintiff's second amended complaint. December 22, 2009	☐
	20	Kyocera Communications Inc's answer, affirmative defenses and counterclaims to paintiff's second amended complaint December 22, 2009	☐
	21	Kyocera Wireless Corp's answer, affirmative defenses and counterclaims to paintiff's second amended complaint December 22, 2009	☐
	22	Defendants Samsung Electronics Co., Ltd.'s; Samsung Electronics Research Institute's and Samsung Semiconductor Europe GMBH' s answer; and Samsung Telecommunications America LLC' s answer and counterclaim to the second amended complaint of plaintiff Fractus, SA. December 23, 2009	☐

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	23	Defendants LG Electronics Inc., LG Electronics USA, Inc., and LG Electronics Mobilecomm USA Inc. answer and counterclaim to second amended complaint. December 28, 2009	☐
	24	Answer of the Sharp Defendants to plaintiff's second amended complaint. December 29, 2009	☐
	25	Amended answer of the Sharp defendants to plaintiff's second amended complaint. February 24, 2010	☐
	26	Defendants Samsung Electronics Co., Ltd.'s; Samsung Electronics Research Institute's and Samsung Semiconductor Europe GMBH' s first amended answer; and Samsung Telecommunications America LLC' s first amended answer and counterclaim to the second amended complaint of plaintiff Fractus, SA. February 24, 2010	☐
	27	Defendants LG Electronics Inc., LG Electronics USA, Inc., and LG Electronics Mobilecomm USA Inc. First amended answer and counterclaim to second amended complaint. January 24, 2010	☐
	28	Defendant HTC America, Inc.'s amended answer and counterclaim to plaintiff's second amended complaint. February 24, 2010	☐
	29	Defendant HTC Corporation's amended answer and counterclaim to plaintiff's second amended complaint. February 24, 2010	☐
	30	Defendant HTC Corporation's amended answer and counterclaim to plaintiff's second amended complaint. February 25, 2010	☐
	31	Defendant HTC America, Inc.'s amended answer and counterclaim to plaintiff's second amended complaint. February 25, 2010	☐
	32	Fractus's answer to defendant Pantech Wireless Inc. in the case of Fractus SA vs. Samsung Electronics cp. 24, June 2009	☐
	33	Fractus's answer to defendant UT Starcom, Inc. counterclaims. in the case of Fractus SA vs. Samsung Electronics cp. 29, June 2009	☐

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	Attorney Docket Number	47005-P018WUSC1

	34	Complaint for patent infringement - Case 6:09-cv-00203. Fractus. May 5, 2009	☐
	35	Civil cover sheet - Case 6:09-cv-00203. Fractus. May 5, 2009	☐
	36	Amended complaint for patent infringement - Case 6:09-cv-00203. May 6, 2009	☐
	37	Second amended complaint for patent infringement - Case 6:09-cv-00203. December 2, 2009	☐
	38	Second amended complaint for patent infringement - Case 6:09-cv-00203. December 8, 2009	☐
	39	Plaintiff Fractus, S. A.'s answer to defendant personal communications devices holdings, LLC's counterclaims to the Second Amended Complaint - Case 6:09-cv-00203. January 4, 2010	☐
	40	Plaintiff Fractus, S. A.'s answer to the counterclaims of defendants Research in Motion LTD. and Research in Motion Corporation to the Second Amended Complaint - Case 6:09-cv-00203. January 4, 2010	☐
	41	Plaintiff Fractus, S. A.'s answer to counterclaims of defendant Pantech Wireless, Inc. to the Second Amended Complaint - Case 6:09-cv-00203. January 4, 2010	☐
	42	Plaintiff Fractus, S. A.'s answer to counterclaims of defendant Kyocera Communications, Inc's Counterclaims to the Second Amended Complaint - Case 6:09-cv-00203. January 4, 2010	☐
	43	Plaintiff Fractus, S. A.'s answer to defendant Kyocera Wireless Corp's Counterclaims to the Second Amended Complaint - Case 6:09-cv-00203. January 4, 2010	☐
	44	Plaintiff Fractus, S. A.'s answer to defendant Palm, Inc's Counterclaims to the Second Amended Complaint - Case 6:09-cv-00203. January 4, 2010	☐

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	45	Plaintiff Fractus, S. A.'s answer to defendant UTStarcom, Inc's Counterclaims to the Second Amended Complaint - Case 6:09-cv-00203. January 4, 2010	☐
	46	Plaintiff Fractus, S. A.'s answer to counterclaims of defendant Samsung Telecommunications America LLC to the Second Amended Complaint - Case 6:09-cv-00203. January 4, 2010	☐
	47	Plaintiff Fractus, S. A.'s answer to counterclaims of defendants LG Electronics Inc., Electronics USA, Inc., and LG Electronics Mobilecomm USA, Inc. to the Second Amended Complaint - Case 6:09-cv-00203. January 4, 2010	☐
	48	Plaintiff Fractus, S. A.'s answer to counterclaims of defendants HTC America, Inc to the Second Amended Complaint - Case 6:09-cv-00203. January 14, 2010	☐
	49	Plaintiff Fractus, S. A.'s answer to amended counterclaims of defendant Samsung Telecommunications america LLC's to Fractus's Second Amended Complaint - Case 6:09-cv-00203. April 1, 2010	☐
	50	Plaintiff Fractus, S. A.'s answer to amended counterclaims of defendant HTC Corporation to Fractus's Second Amended Complaint - Case 6:09-cv-00203. April 1, 2010	☐

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FORM 3

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	1	Plaintiff Fractus, S. A.'s answer to amended counterclaims of defendant HTC America, Inc. To Fractus's Second Amended Complaint - Case 6:09-cv-00203. April 1, 2010	☐
	2	Plaintiff Fractus, S. A.'s answer to amended counterclaims of defendant LG Electronics Inc., LG Electronics USA, Inc., and LG Electronics Mobilecomm USA Inc's to Fractus's Second Amended Complaint - Case 6:09-cv-00203. April 1, 2010	☐
	3	Love , J. D. Memorandum opinion and order. Court 20110120	☐
	4	NA. Defendant's notice of compliance regarding second amended invalidity contentions. Defendants 20110121	☐
	5	NA. Fractus' reply to defendant's motion for reconsideration of, and objections to, magistrate Judge Love's markman order. Fractus 20110204	☐
	6	NA. Declaration of Thomas E. Nelson - Exhibit A - Antenna photos. Defendants 20110203	☐
	7	NA. Report and recommendation of United States magistrate judge. Court 20110208	☐
	8	NA. Order adopting report and recommendation of magistrate judge. Court 20110211	☐
	9	NA. Notice of compliance with motion practice orders. Fractus 20110214	☐
	10	NA. Defendants LG Electronics Inc, LG Electronics USA, and LG Electronics Mobilecomm USA Inc's second amended answer and counterclaim to second amended complaint. Defendants 20110228	☐
	11	NA. Reply brief in support of Defendant's motion for reconsideration of the court's ruling on the term "at least a portion" in the court's December 17, 2010 claim construction order based on newly-available evidence. Defendants 20110225	☐

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	12	NA. Defendants Samsung Electronics Co LTD (et al) second amended answer and counterclaims to the second amended complaint of plaintiff Fractus SA. Defendants 20110228	☐
	13	NA. Defendant Pantech Wireless Inc amended answer, affirmative defenses, and counterclaims to Fractus' second amended complaint. Defendants 20110228	☐
	14	LITIGATION - Invalidity Contentions - Defendants Defendants Invalidity contentions including apendix and exhibits refering Multiband Monopole. Defendants 20100208	☐
	15	Infringement Chart - Kyocera MARBL. Patent: 7411556 Fractus 20091105	☐
	16	Infringement Chart - Kyocera S2400. Patent: 7411556 Fractus 20091105	☐
	17	Infringement Chart - Kyocera NEO E1100. Patent: 7411556 Fractus 20091105	☐
	18	Infringement Chart - LG Shine CU720. Patent: 7411556 Fractus 20091105	☐
	19	Infringement Chart - LG Rumor. Patent: 7411556 Fractus 20091105	☐
	20	Infringement Chart - LG Voyager VX10000. Patent: 7411556 Fractus 20091105	☐
	21	Infringement Chart - LG VX8350. Patent: 7411556 Fractus 20091105	☐
	22	Infringement Chart - LG Vu CU920. Patent: 7411556 Fractus 20091105	☐

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	23	Infringement Chart - LG VX5400. Patent: 7411556 Fractus 20091105	☐
	24	Infringement Chart - LG VX5500. Patent: 7411556 Fractus 20091105	☐
	25	Infringement Chart - LG AX8600. Patent: 7411556 Fractus 20091105	☐
	26	Infringement Chart - LG Flare LX165. Patent: 7411556 Fractus 20091105	☐
	27	Infringement Chart - LG Aloha LX140. Patent: 7411556 Fractus 20091105	☐
	28	Infringement Chart - LG Chocolate VX8550. Patent: 7411556 Fractus 20091105	☐
	29	Infringement Chart - LG Muziq LX570. Patent: 7411556 Fractus 20091105	☐
	30	Infringement Chart - LG VX9400. Patent: 7411556 Fractus 20091105	☐
	31	Infringement Chart - LG VX8560 Chocolate 3. Patent: 7411556 Fractus 20091105	☐
	32	Infringement Chart - LG EnV3 VX9200. Patent: 7411556 Fractus 20091105	☐
	33	Infringement Chart - LG Lotus. Patent: 7411556 Fractus 20091105	☐

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	34	Infringement Chart - LG AX155. Patent: 7411556 Fractus 20091105	☐
	35	Infringement Chart - LG enV Touch VX1100. Patent: 7411556 Fractus 20091105	☐
	36	Infringement Chart - LG AX380. Patent: 7411556 Fractus 20091105	☐
	37	Infringement Chart - LG VX8360. Patent: 7411556 Fractus 20091105	☐
	38	Infringement Chart - Pantech Breeze C520. Patent: 7411556 Fractus 20091105	☐
	39	Infringement Chart - Patench DUO C810. Patent: 7411556 Fractus 20091105	☐
	40	Infringement Chart - Blackberry 8110. Patent: 7411556 Fractus 20091105	☐
	41	Infringement Chart - Blackberry 8120. Patent: 7411556 Fractus 20091105	☐
	42	Infringement Chart - Blackberry 8310. Patent: 7411556 Fractus 20091105	☐
	43	Infringement Chart - Blackberry 8330. Patent: 7411556 Fractus 20091105	☐
	44	Infringement Chart - Blackberry 8130. Patent: 7411556 Fractus 20091105	☐

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	45	Infringement Chart - Blackberry 8320. Patent: 7411556 Fractus 20091105	☐
	46	Infringement Chart - Blackberry 8220. Patent: 7411556 Fractus 20091105	☐
	47	Infringement Chart - Blackberry 8100. Patent: 7411556 Fractus 20091105	☐
	48	Infringement Chart - Blackberry 8820. Patent: 7411556 Fractus 20091105	☐
	49	Infringement Chart - Blackberry 8830. Patent: 7411556 Fractus 20091105	☐
	50	Infringement Chart - Samsung SCH-R500. Patent: 7411556 Fractus 20091105	☐

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FORM 4

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7095372		2006-08-22	Soler	
	2	7463199		2008-12-09	Soler	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Attorney Docket Number	47005-P018WUSC1

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	1	Infringement Chart - Samsung M320. Patent: 7411556 Fractus 20091105	☐
	2	Infringement Chart - Samsung SCH U340. Patent: 7411556 Fractus 20091105	☐
	3	Infringement Chart - Samsung SCH U410. Patent: 7411556 Fractus 20091105	☐
	4	Infringement Chart - Samsung SCH-R430. Patent: 7411556 Fractus 20091105	☐
	5	Infringement Chart - Samsung SCH U700. Patent: 7411556 Fractus 20091105	☐
	6	Infringement Chart - Samsung SCH-U940. Patent: 7411556 Fractus 20091105	☐
	7	Infringement Chart - Samsung SGH A117. Patent: 7411556 Fractus 20091105	☐
	8	Infringement Chart - Samsung SCH A127. Patent: 7411556 Fractus 20091105	☐
	9	Infringement Chart - Samsung SGH T229. Patent: 7411556 Fractus 20091105	☐
	10	Infringement Chart - Samsung SGH T439. Patent: 7411556 Fractus 20091105	☐

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	11	Infringement Chart - Samsung SGH T919. Patent: 7411556 Fractus 20091105	☐
	12	Infringement Chart - Samsung SGH-A437. Patent: 7411556 Fractus 20091105	☐
	13	Infringement Chart - Samsung SGH A867. Patent: 7411556 Fractus 20091105	☐
	14	Infringement Chart - Samsung SCH-U310. Patent: 7411556 Fractus 20091105	☐
	15	Infringement Chart - Samsung SGH-A237. Patent: 7411556 Fractus 20091105	☐
	16	Infringement Chart - Samsung SGH-T639. Patent: 7411556 Fractus 20091105	☐
	17	Infringement Chart - Samsung SGH-A837. Patent: 7411556 Fractus 20091105	☐
	18	Infringement Chart - Samsung SCH-R600. Patent: 7411556 Fractus 20091105	☐
	19	Infringement Chart - Samsung SCH-U520. Patent: 7411556 Fractus 20091105	☐
	20	Infringement Chart - Samsung SCH-U750. Patent: 7411556 Fractus 20091105	☐
	21	Infringement Chart - Samsung SGH-T219. Patent: 7411556 Fractus 20091105	☐

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	22	Infringement Chart - Samsung SGH-T929. Patent: 7411556 Fractus 20091105	☐
	23	Infringement Chart - Samsung SCH-A645. Patent: 7411556 Fractus 20091105	☐
	24	Infringement Chart - Samsung FlipShot SCH-U900. Patent: 7411556 Fractus 20091105	☐
	25	Infringement Chart - Samsung SGH-A257. Patent: 7411556 Fractus 20091105	☐
	26	Infringement Chart - Samsung SGH-T559. Patent: 7411556 Fractus 20091105	☐
	27	Infringement Chart - Samsung SPH-M550. Patent: 7411556 Fractus 20091105	☐
	28	Infringement Chart - Sanyo Katanna II. Patent: 7411556 Fractus 20091105	☐
	29	Infringement Chart - Sanyo Katana LX. Patent: 7411556 Fractus 20091105	☐
	30	Infringement Chart - Sharp Sidekick LX. Patent: 7411556 Fractus 20091105	☐
	31	Infringement Chart - UTStarcom CDM7126. Patent: 7411556 Fractus 20091105	☐
	32	Defendant's reply in suport of their motion for summary judgment of invalidity based on indefiniteness and lack of written description for certain terms Defendants 20100830	☐

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	Attorney Docket Number	47005-P018WUSC1

	33	NA. Expert declaration by Dr. D. Jaggard including exhibits (curriculum and datasheets from Cushcraft, Antenova, Ethertronics and Taoglas) Fractus 20100816	☐
	34	NA. Fractus's opposition to defendants' motion for summary judgement of invalidity based on indefiniteness and lack of written description for certain terms Fractus 20100816	☐
	35	Howe , M. Declaration of Micah Howe in support of Fractus SA opposition to defendants' motion for summary judgement of invalidity based on indefiniteness and lack of written description for certain terms Heim , Payne and Chorus LLP 20100816	☐
	36	NA. IEEE Standard Dictionary of Electrical and Electronics. Terms IEEE Press (6th ed.) pages 359, 688, and 878 19960101	☐
	37	Werner , D. H and Mittra , R. Frontiers in electromagnetics. IEEE Press. pages 5-7 20000101	☐
	38	Nelson , Thomas R. ; Jaggard , Dwight L. Fractals in the Imaging Sciences J. Optical Society AM. 19990101	☐
	39	Stutzman , W. ; Thiele , G. Antenna theory and design. John Wiley and Sons. Pags. 18, 36 19810101	☐
	40	Jaggard , D. Diffraction by Bandlimited Fractal Screens. Optical Society AM 19870601	☐
	41	Feder, J. Fractals. Plenum Press. pages 10-11, 15-17, and 25 19880101	☐
	42	Fleishmann , M. ; Tildesley , DJ ; Balls , RC. Fractals in the natural sciences. Royal Society of London 19990101	☐
	43	Kritikos , H.N. ; Jaggard , D.L. Recent advances in electromagnetic theory - Chapter 6 On fractal electrodynamics. Springer - Verlag. Chapter 6 19901001	☐

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	Attorney Docket Number	47005-P018WUSC1

	44	Caswell , W. E. Invisible errors in dimensions calculations: geometric and systematic effects Dimensions and Entropies in Chaotic Systems 19860101	☐
	45	NA. European Patent Convention - Article 123 European Patent Office 20000101	☐
	46	Kyriacos , S. ; Buczkowski , S. et al. A modified box-counting method Fractals - World Scientific Publishing Company 19940101	☐
	47	Carpintero , F. Reply to the Written Opinion for the PCT patent application ES99/00296 dated on November 15, 2001 Herrero & Asociados 20011115	☐
	48	Werner , D. H. et al. Frontiers in Electromagnetics - Chapter 3 - The Theory and design of fractal antenna arrays IEEE Press Series 20000101	☐
	49	Balanis, Constantine A. Antenna theory - Analysis and design - Chapter 2 - Fundamental parameters of antennas John Wiley & Sons 19820101	☐
	50	Sauer , J. M. Preliminary amendment for the US patent application 10/963080 Jones Day. Case 6:09-cv-00203-LED-JDL 20041210	☐

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U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7342553		2008-03-11	SOLER	

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	Attorney Docket Number	47005-P018WUSC1

	1	NA. Merriam-Webster's Collegiate Dictionary (1993) Merriam-Webster's. Case 6:09-cv-00203-LED-JDL 19930101	☐
	2	Chen , Z. N. Broadband probe-fed L-shaped plate antenna Microwave and Optical Technology Letters 20000805	☐
	3	NA. American Heritage College Dictionary (1997). Pags 340 and 1016 Mifflin Comp. Case 6:09-cv-00203-LED-JDL 19970101	☐
	4	Buczkowski , Stéphane ; Kyriacos. The modified box-countig method: analysis of some characteristic paramenters. Pattern Recognition 19980420	☐
	5	Wolin , H. A. Preliminary Amendment of U.S. Application 10/102568 Rosenman & Colin LLP 20020312	☐
	6	Menefee , J. Office Action for the US patent reexamination 95/001390 dated Aug. 12, 2010 USPTO 20100812	☐
	7	Menefee , James. Office Action for the US patent reexamination 95/001389 dated on August 12, 2010 USPTO 20100812	☐
	8	Phan , T. Office Action for US Patent Application No 10/102568 dated on January 23, 2004 USPTO 20040123	☐
	9	Fractus vs. Samsung et al. Claim construction and motion for summary judgement - Markman Hearing - [Defendants] Defendants 20100902	☐
	10	Fractus' Claim Construction Presentation - Markman Hearing - Fractus v. Samsung et al. 609-cv-00203 September 2,2010 20100902	☐
	11	Love , J. Memorandum order and opinion. Court 20101217	☐

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	12	Gianvittorio , John Paul et al. Fractal antennas - a novel antenna miniturization technique and applications Antennas and Propagation Magazine, IEEE 20020201	☐
	13	Best , Steven R. The fractal loop antenna: a comparison of fractal and non-fractal geometries Antennas and Propagation Society International Symposium, 2001. IEEE 20010101	☐
	14	Romeu , J. et al. Fractal FSS - A novel dual-band frequency selective surface Antennas and Propagation, IEEE Transactions on 20000701	☐
	15	Fanjul , J. International Preliminary Examination Report for application no. PCT/ES99/00296 EPO 20011219	☐
	16	NA. Fractus 's Objections to claim construction memorandum and order. Case 6:09-cv-00203. Fractus 20110114	☐
	17	Puente , C. ; Romeu , J. ; Cardama , A. Fractal-shaped antennas Frontiers in electromagnetics - IEEE Press 20000101	☐
	18	Love , J. Court Order. Provisional claim construction and motion for summary judgement. Provisional markman order. Court 20101109	☐
	19	Jaggard , D. L. Rebuttal expert report of Dr. Dwight L. Jaggard (redacted version) Fractus 20110216	☐
	20	Long , S. A. Rebuttal expert report of Dr. Stuart A. Long (redacted version) Fractus 20110216	☐
	21	Stutzman , W. L. Rebuttal expert report of Dr. Warren L. Stutzman (redacted version) Fractus 20110216	☐
	22	Borowski , E. J. Dictionary of Mathematics Collins - Case 6:09-cv-00203-LED-JDL 19890101	☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Attorney Docket Number	47005-P018WUSC1

	23	Mehaute, A. Fractal Geometrics CRC Press - Case 6:09-cv-00203-LED-JDL 19900101	☐
	24	NA. Defendants RIM, Samsung, HTC, LG and Pantech's response to plantiff Fractus SA's opening claim construction brief in "Case 6:09-cv-00203-LED-JDL Defendants 20100730	☐
	25	NA. Defendants RIM, Samsung, HTC, LG and Pantech's response to plantiff Fractus SA's opening claim construction brief in "Case 6:09-cv-00203-LED-JDL - Exhibit 41 - Demonstrative re: counting segments Defendants 20100730	☐
	26	NA. Defendants RIM, Samsung, HTC, LG and Pantech's response to plantiff Fractus SA's opening claim construction brief in "Case 6:09-cv-00203-LED-JDL - Exhibit 42 - Demonstrative showing how straight segments can be fitted over a curved surface Defendants 20100730	☐
	27	NA. Defendants RIM, Samsung, HTC, LG and Pantech's response to plantiff Fractus SA's opening claim construction brief in "Case 6:09-cv-00203-LED-JDL" - Exhibit 1 - Chart of Agreed Terms and Disputed Terms Defendants 20100730	☐
	28	NA. Defendants RIM, Samsung, HTC, LG and Pantech's response to plantiff Fractus SA's opening claim construction brief in "Case 6:09-cv-00203-LED-JDL" - Exhibit 2 - Family Tree of Asserted Patents Defendants 20100730	☐
	29	NA. Response of defendants Kyocera Communications, Inc; Palm Inc. and UTStarcom, Inc. to plantiff Fractus SA's opening claim construction brief in "Case 6:09-cv-00203-LED-JDL" Defendants 20100730	☐
	30	NA. Claims for the EP patent 00909089. Herrero y Asociados 20050128	☐
	31	NA. The American Heritage College Dictionary - pag 684 , 1060 Houghton Mifflin Comp. - 3d ed. - Case 6:09-cv-00203-LED-JDL 19970101	☐
	32	NA. The American Heritage Dictionary of the English Language Houghton Mifflin Company - 4th ed.- Case 6:09-cv-00203-LED-JDL 20000101	☐
	33	Walker , B. D. Response office action for the US patent application 11/179250 Howison & Arnott - Case 6:09-cv-00203-LED-JDL 20050712	☐

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	Attorney Docket Number	47005-P018WUSC1

	34	Walker , B. Preliminary amendment for the US patent application 11/780932 dated on July 20, 2007 Howison & Arnott - Case 6:09-cv-00203-LED-JDL 20070720	☐
	35	Theiler , J. Estimating fractal dimension J. Opt. Soc. Am. A. Case 6:09-cv-00203-LED-JDL 19900601	☐
	36	Moore , S. Response to Office Action dated February 7, 2006 of US patent application no. 11/033788 Jenkens & Gilchrist 20060601	☐
	37	Stutzman , W. L. ; Thiele , G. A. Antenna theory and design John Wiley and Sons. Pages 8-9 , 43-48 , 210-219 19980101	☐
	38	Rich , Barnett. Review of Elementary Mathematics 2d ed.1997 McGraw - Hill - Case 6:09-cv-00203-LED-JDL 19970101	☐
	39	Sclater , N. ; Markus , J. McGraw-Hill Electronics Dictionary McGraw - Hill 19970101	☐
	40	Johnson , R. Antenna engineering handbook (3rd. edition) - Pages 14-1 - 14-5 McGraw-Hill 19930101	☐
	41	Dictionary of Scientific & Technical Terms (6th Ed., 2002) pag 1489 McGraw-Hill 20020101	☐
	42	Parker , S. McGraw-Hill Dictionary of Scientific and Technical Terms (5th ed. 1994) McGraw-Hill - Case 6:09-cv-00203-LED-JDL 19940101	☐
	43	NA. The American Heritage Dictionary - pag 817 , 961 Morris - William - (Second College edition) - Case 6:09-cv-00203-LED-JDL 19820101	☐
	44	Henderson West , B. The Prentice-Hall encyclopedia of mathematics Prentice-Hall 19820101	☐

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	Attorney Docket Number	47005-P018WUSC1

	45	West , B.H. et al. The Prentice-Hall Encyclopedia of Mathematics (1982) Prentice-Hall - Case 6:09-cv-00203-LED-JDL 19820101	☐
	46	NA. IEEE Standard Definitions of Terms for Antennas, IEEE Std. 145-1993 (1993) The Institute of Electrical and Electronics Engineers - Case 6:09-cv-00203-LED-JDL 19930318	☐
	47	Borja , C. Antenas fractales microstrip Universitat Politècnica de Catalunya 19970701	☐
	48	Phan , T. Notice of allowance of US patent application No. 10/963080 dated September 1, 2005. USPTO 20050901	☐
	49	Phan , T. Notice of allowance of US patent application No. 11/102390 dated July 6, 2006. USPTO 20060706	☐
	50	Phan , T. Notice of allowance of US patent application No. 11/179257 dated October 19, 2006 USPTO 20061019	☐

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	Attorney Docket Number	47005-P018WUSC1

FORM 6

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7528782		2009-05-05	Baliarda	

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	00/36700	WO		2000-06-22	Ying		☐

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NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	1	Phan , T. Office Action for US Patent Application No 11/550256 dated on January 15, 2008 USPTO 20080115	☐
	2	Wimer , M. Notice of allowance of US patent application no. 10/822933 dated on October 18, 2007 USPTO 20071018	☐
	3	Collier , C. P. Geometry for teachers Waveland Press, Inc. 19840101	☐
	4	Mandelbrot , B. B. Opinions (Benoit B. Mandelbrot) World Scientific Publishing Company - Case 6:09-cv-00203-LED-JDL 19930101	☐
	5	Werner , D. H. ; Werner , P. L. ; Ferrare , A. J. Frequency independent features of self-similar fractal antennas Antennas and Propagation Society International Symposium, 1996. AP-S. Digest 19960721	☐
	6	Foroutan-pour , K. ; Dutilleul , P. ; Smith , D.L. Advances in the implementation of the box-counting method of fractal dimension estimation Applied Mathematics and Computation ; Elsevier 19990501	☐
	7	Graf, R. Modern dictionary of electronics Butterworth-Heinemann (6th Ed.) 19840101	☐
	8	NA. Collins Dictionary - Pag608. Collins 19790101	☐
	9	NA. Int'l Electro-Technical Commission IEV No. 712-01-04 - Electropedia : the world's online electrotechnical vocabulary Electropedia - Commission Electrotechnique Internationale - http://www.electropedia.org 19980401	☐
	10	NA. Webster's New Collegiate Dictionary G & C Merriam Co. 19810101	☐
	11	NA. IEEE Standard dictionary of electrical and electronics terms IEEE Standard (6th ed.) 19960101	☐

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	12	Sawaya , K. ; Ishizone , T. ; Mushiake , Y. A simplified Expression of Dyadic Green's Function for a Conduction Half Sheet Vol. AP-29, No. 5 (Sept. 1981) IEEE TRANSACTIONS ON ANTENNAS & PROPAGATION 19810901	☐
	13	Pozar , D. ; Newman , E. Analysis of a Monopole Mounted near or at the Edge of a Half-Plane IEEE Transactions on Antennas and Propagation 19810501	☐
	14	Johnson, R. Antenna engineering handbook - Pages 4-26 - 4-33 Mc Graw Hill - (3rd Ed.) 19930101	☐
	15	NA. The American Heritage Dictionary - pag 311 , 1208 New College ed. (2nd ed.) 19820101	☐
	16	NA. The American Century Dictionary Oxford University Press 19950101	☐
	17	Rademacher , H. ; Toeplitz , O. The Enjoyment of Math Princeton Science Library 19570101	☐
	18	NA. The Random House Dictionary Random House 19840101	☐
	19	Pressley, A. Elementary Differential Geometry Springer 20000101	☐
	20	Peitgen & D. Saupe, H. The science of fractal images Springer-Verlag 19880101	☐
	21	Peitgen et al, H O. Chaos and fractals : new frontiers of science. Pags. 22-26, 62-66, 94-105, 212-219, 229-243 Springer-Verlag 19920101	☐
	22	Nguyen , H. Notice of Allowance of US patent application no. 10/182635 dated on April 4, 2005 USPTO 20050411	☐

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	23	Request for Inter partes reexamination of US patent no. 7411556 - 95/000600 dated on December 3, 2010 - Exhibits HTC 20101203	☐
	24	Request for Inter partes reexamination of US patent no. 7411556 - 95/000590 dated on December 16, 2010 - Exhibits Kyocera 20101216	☐
	25	Request for inter partes reexamination of US patent no. 7411556 - 95/001462 dated on October 1, 2010 - Exhibits Samsung 20101001	☐
	26	Vinoy , K. J. et al. Hilbert curve fractal antenna: a small resonant antenna for VHF/UHF applications. Microwave and Optical Technology Letters. Pag 215-219 20010501	☐
	27	NA. Amendments and Review of CN patent application no. 01823716.9 of OA dated February 16, 2007. Patent and Trademanrk Office, China Council for the Promotion of International Trade Patent and Trademanrk Office, China Council for the Promotion of International Trade 20070821	☐
	28	Feng , Liu. Office Action of CN patent application 018237169 dated February 16, 2007 The State Intelletual Property Office of the People´s Republic of China 20070216	☐
	29	NA. Response to Second OA of CN patent application no. 01823716.9 dated September 21, 2007 CCPIT Patent and Trademark Law Office 20071203	☐
	30	Feng , Liu. Second Office Action of CN patent application 018237169 dated September 21, 2007 The State Intellectual Property Office of the People´s Republic of China 20070921	☐
	31	NA. FCC - United States table of frequency allocations. 377-538 Federal Communications Commission 19991001	☐
	32	NA. United States Table of Frequency allocations - The Radio Spectrum United States Department of Commerce 19960301	☐
	33	Buczkowski , Stéphane ; Kyriacos , Soula ; Nekka , Fahima ; Cartilier , Louis. The modified box-countig method: analysis of some characteristic paramenters. 411-418(8) Pattern Recognition 19980420	☐

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	Attorney Docket Number	47005-P018WUSC1

	34	Kyriacos , S. ; Buczkowski , S. et al. A modified box-counting method. 321-324 Fractals - World Scientific Publishing Company 19940101	☐
	35	Mehaute, A. Fractal Geometrics. 3-35 CRC Press - Case 6:09-cv-00203-LED-JDL 19900101	☐
	36	Barnsley , M. Fractals Eveywhere Academic Press Professional 19930101	☐
	37	Shafer , G. Probability and Finance John Wiley & Sons 20010101	☐
	38	Parron , J. ; Rius , J. ; Romeu , J. Study of the Koch fractal monopole in the frequency domain Fractalcoms 20020530	☐

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EXAMINER SIGNATURE

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)
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	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

FORM 7

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7675470	B2	2010-03-09	SANZ ET AL.	
	2	7423592	B2	2008-09-09	PROS ET AL.	
	3	6087990		2000-07-11	THILL ET AL.	
	4	6011518		2000-01-04	YAMAGISHI ET AL.	

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20040009755	A1	2004-01-15	YOSHIDA	

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	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

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	1	Bach Andersen , J. et al., On closely coupled dipoles in a random field, Antennas and Wireless Propagation Letters, IEEE, 2006-12-01	☐
	2	Balanis , Constantine A., Antenna Theory - Analysis and design - Chapter 10, Hamilton Printing, 1982-01-01	☐
	3	Bhavsar , Samir A., Fractus S.A. v. Samsung Electronics Co., Ltd. et al., 6:09-cv-00203 and Fractus S.A. v. LG Electronics Mobilecomm U.S.A., Inc. et al., 6-09-cv-00205 disclosure of material information to the USPTO, Baker Botts LLP, 2009-10-28	☐
	4	Rudge , A. W. et al., The handbook of antenna design, IEE Eletromagnetic Waves Series; Peter Peregrinus Ltd.; 2nd ed., 1986-01-01	☐
	5	Sauer , Joseph M., Response to the Office Action dated October 4, 2004 for the US Patent Application No. 10/422578, Jones Day, 2005-01-06	☐
	6	Sauer , Joseph M., Response to the Office Action dated April 7, 2005 for the US Patent Application 10/422578, Jones Day, 2005-05-31	☐
	7	Sauer , Joseph M., Request for Continued Examination for US Patent Application No. 10/422578 with response to the office action dated on April 7, 2005 and the advisory action dated on June 23, 2005, Jones Day, 2005-08-08	☐
	8	Wimer , Michael C., Office Action for US Patent Application No. 10/422578 dated on October 4, 2004, USPTO, 2004-10-04	☐

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	Attorney Docket Number	47005-P018WUSC1

OPAP IAP1 MAR 30 2011 PATENT & TRADEMARK OFFICE

	9	Wimer , Michael, Office Action for US Patent Application No 10/422578 dated on April 7, 2005, USPTO, 2005-04-07	☐
	10	Wimer , M. C., Office Action for the US patent application 10/422578 dated on August 24, 2005, USPTO, 2005-08-24	☐
	11	Wimer , Michael C., Advisory Action before the filing of an Appeal Brief for US Patent Application No. 10/422578, USPTO, 2005-06-23	☐
	12	NA, Defendant HTC Corporation's First amended answer and counterclaim to plaintiff's amended complaint, Defendants, 2009-10-02	☐
	13	NA, European Search Report of patent application no. 10180818 dated December 13, 2010, European Patent Office, 2010-12-13	☐

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Switzerland

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Date of mailing
(day/month/year) 29.08.2002

International application No: PCT/EP00/00411

This International Preliminary Examining Authority transmits herewith the following documents:

1. ☐ demand (Rule 61.1(a)).

2. ☒ copy of the international preliminary examination report and its annexes (Rule 71.1).

3. ☐ _____ other documents *(specify)*:

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Form PCT/IPEA/415 (January 1995)

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
2000015		

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/EP00/00411	19/01/2000	19/01/2000

International Patent Classification (IPC) or national classification and IPC
H01Q1/36

Applicant
FRACTUS, S.A. et al.

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 12 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 6 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☒ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations suporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
08/08/2001	29.08.2002

Name and mailing address of the international preliminary examining authority:

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Authorized officer

Felgel-Farnholz, W-D

Telephone No. +49 89 2399 2713

Form PCT/IPEA/409 (cover sheet) (January 1994)

Referring to Item I: Basis of the report

In addition the originally filed Claims 1-16 are taken into account by the International Preliminary Examining Authority for examining lack of unity in section IV below.

Referring to Item III: Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. Claim 2 as filed with letter of 5.4.2002 reads as follows wherein the bold printing of unclear expressions is added:
   "An antenna in which at least one of its parts is shaped as a space-filling curve (SFC), according to Claim 1, wherein said SFC features a **box-counting dimension** larger than one, being said **box-counting dimension computed as usual as the slope of the straight portion of a log-log graph, wherein such a straight portion is substantially defined as a straight segment over at least an octave of scales on the horizontal axes of the log-log graph.**"
   The definition of the so called **box-counting dimension** is neither clearly defined in claim 2 nor in the description (see page 3, lines 19-25). Therefore no examination can be performed.
2. Moreover, there are doubts if the insertion of references back to Claim 1 or 2 into Claims 2-4 as filed with letter of 5.4.2002 with respect to the originally filed Claims 2-4, which were formulated independently, extends their subject matter beyond the content of the application as originally filed. This would constitute an infringement of Article 34 (2) (b) sentence 2 PCT because in the description there was not found a clear hint that the subject matter of the originally filed Claims 2-4 are disclosed in connection with space-filling curves as defined in Claim 1.

Referring to Item IV: Lack of unity of invention

1. The **set of originally filed Claims 1-16** lacked unity within the meaning of Rule 13.1 PCT because 10 different inventions are claimed in 16 independent Claims 1-16, which are defined by the following groups of claims:
   I. Claims 1-4, 14 and 15 defining an antenna in which at least one of its parts is shaped as a space-filling curve (SFC).
   II. Claims 5, 14 and 15 defining a dipole antenna comprising two conducting or superconducting arms in which at least a part of at least one of the arms of the dipole is **shaped either as a SFC, Hilbert, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ curve**

according to claim 1, 2, 3 or 4.

III. Claims 6, 14 and 15 defining a monopole antenna comprising a radiating arm and a ground counterpoise in which at least a part of said is **shaped either as a SFC, Hilbert, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ curve according to claim 1, 2, 3 or 4.**

IV. Claims 7, 10, 14 and 15 defining an aperture antenna, e.g. a slot antenna, comprising at least a conducting or superconducting surface and an aperture on said surface wherein the surface is characterized by its perimeter which is **shaped either as a SFC, Hilbert, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ curve according to claim 1, 2, 3 or 4.**

V. Claims 8, 14 and 15 defining a loop antenna comprising a conducting or superconducting wire wherein at least a portion of the wire **is shaped either as a SFC, Hilbert, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ curve according to claim 1, 2, 3 or 4.**

VI. Claims 9, 14 and 15 defining a patch antenna comprising at least a conducting or superconducting ground plane and a conducting or superconducting patch parallel to said ground-plane characterized by the perimeter of the patch which is **shaped either as a SFC, Hilbert, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ curve according to claim 1, 2, 3 or 4.**

VII. Claims 11, 14 and 15 defining a horn antenna characterized by the cross-section of the horn which is **shaped either as a SFC, Hilbert, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ curve according to claim 1, 2, 3 or 4.**

VIII. Claims 12, 14 and 15 defining a reflector antenna characterized by the perimeter of the reflector which is **shaped either as a SFC, Hilbert, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ curve according to claim 1, 2, 3 or 4.**

IX. Claims 13, 14 and 15 defining a frequency selective surface (FSS) comprising a conducting or superconducting surface, wherein such surface is impressed with at least an slot, being that slot **shaped either as a SFC, Hilbert, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ curve according to claim 1, 2, 3 or 4.**

X. Claims 16 defining a method for determining and shaping a characteristic part of an antenna consisting on choosing a curve as the basic shape for said part, being said curve characterized by its constructing algorithms, said algorithms consisting on Iterated Function Systems (IFS), Multi Reduction Copy Machine (MRCM), Networked Multi Reduction Copy Machine (NMRC) or a combination of said mathematical algorithms.

2. In response to the invitation of the International Preliminary Examining Authority to restrict the claims or to pay additional fees the applicants have filed with their letter of 5.4.2002 a **new set of restricted Claims 1-19** wherein the originally independent Claims 5-13 were directly appended to new Claim 1 as new Claims 5-17 and originally filed Claim 16 was suppressed.

3. The present application **with the new set of Claims 1-19** lacks unity within the meaning of Rule 13.1 PCT because 9 different inventions are claimed in the Claims 1-19 as filed with letter of 5.4.2002 which are defined by the following groups of claims:

I. Claims 1-5, 18 and 19 defining an antenna in which at least one of its parts **is shaped as a space-filling curve (SFC)**.

II. Claims 6, 18 and 19 defining a **dipole** antenna comprising two conducting or superconducting arms in which at least a part of at least one of the arms of the dipole is **shaped either as a SFC, Hilbert, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ curve.**

III. Claims 6, 18 and 19 defining a **monopole** antenna comprising a radiating arm and a ground counterpoise in which at least a part of said is **shaped either as a SFC, Hilbert, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ curve**.

IV. Claims 8, 13, 18 and 19 defining an **aperture** or a **slot** antenna, comprising at least a conducting or superconducting surface and an aperture on said surface wherein the surface is characterized by its perimeter which is **shaped either as a SFC, Hilbert, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ curve**.

V. Claims 9, 10, 18 and 19 defining a **loop** antenna comprising a conducting or superconducting wire or a conducting or superconducting surface with a slot or gap wherein at least a portion of the wire and slot or gap,

respectively, **is shaped either as a SFC, Hilbert, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ curve**.

VI. Claims 11, 12, 18 and 18 defining a **patch** antenna comprising at least a conducting or superconducting ground plane and a conducting or superconducting patch parallel to said ground-plane wherein either the perimeter of the patch or a slot or aperture is **shaped either as a SFC, Hilbert, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ curve**.

VII. Claims 11, 14 and 15 defining a horn antenna characterized by the cross-section of the horn which is **shaped either as a SFC, Hilbert, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ curve according to claim 1, 2, 3 or 4**.

VIII. Claims 12, 14 and 15 defining a **reflector** antenna characterized by the perimeter of the reflector which is **shaped either as a SFC, Hilbert, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ curve according to claim 1, 2, 3 or 4**.

IX. Claims 13, 14 and 15 defining a **frequency selective surface** (FSS) comprising a conducting or superconducting surface, wherein such surface is impressed with at least an slot, being that slot **shaped either as a SFC, Hilbert, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ curve according to claim 1, 2, 3 or 4**.

4. According to Article 34 (3) (a) with Rule 13.1 PCT claims directed to different subject matter may be included in one and the same international patent application only if they are linked by a single, general inventive concept. Moreover, according to Rule 13.1 PCT the requirement of unity of invention shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features. The expression "special technical feature" shall mean those features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art.

4.1 However, the feature being identical in groups II-IX of the claims that an antenna portion is **shaped either as a SFC, Hilbert, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ curve** is as well known from document D1 (see especially Fig. 8B: fractional antennas 510A, 5120B, 510C) and D2 (see especially Fig. 2A and 2B: ZZ curve or Hilbert curve 40A or 40B).

Therefore, none of those known features are such "special technical feature" which can form the single, general inventive concept which could link all eight groups II-IX of claims.

4.2 According to page 3, lines 6-9 and page 4, lines 1-10 of the description the 9 inventions I-IX claimed in the present application are based on the common problem, "a novel set of geometries named Space-Filling Curves (hereafter SFC) are introduced for the design and construction of small antennas that improve the performance of other classical antennas described in the prior art (such as linear monopoles, dipoles and circular or rectangular loops)", and especially "the key point of the present invention is shaping part of the antenna as a space-filling curve, that is, a curve that is large in terms of physical length but small in terms of the area in which the curve can be included".

4.3 That problem was, however, known e.g. from document D1 (paragraph bridging pages 2-3) - D1 is defined in section V below - before the application date of the present application and so was no longer new. It is noted that in document D1 the special term "fractal antennas" is used, however, the antennas as shown in the figures, e.g. Figs. 5B, 7C1, 7C2, 8B and 8C show a similar construction as the space-filling antennas shown in the figures of the present application (e.g. Figs. 3-7), therefore it is assumed that they represent the same kind of mathematical curves which are only defined in the present application in a different way as space-filling curves.

4.4 Moreover, the subject matter of Claim 1 is already known either from document D1 or from document D2 (see section V below).

The requisite unity of invention therefore no longer exists inasmuch as the subject matter of Claims 6, 8, 9, 11, 12 and 13 is no longer linked with the subject matter of Claim 1 by a single, general inventive concept which could link all eight groups I-IX of claims.

4.5 The International Preliminary Examining Authority is, therefore, of the opinion that there is no single, general inventive concept which links the subject matter of the 9 different inventions claimed in the present application. Thus the present application lacks unity within the meaning of Article 34 (3) (a) with Rule 13.1 PCT.

Referring to Item V: Reasoned statement under Article 35 (2) PCT with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. At the present stage of the procedure the following is noted with respect to novelty and inventive step of the independent Claim 1 of the first group I of claims.

1.1 The following documents D1 to D5 were cited in the international search report and document D6 was cited in the application:

D1: WO 97 06578 A (FRACTAL ANTENNA SYSTEMS INC ;COHEN NATHAN (US)) 20 February 1997 (1997-02-20)

D2: WO 99 27608 A (COHEN NATHAN) 3 June 1999 (1999-06-03)

D3: US-A-4 843 468 (DREWERY JOHN O) 27 June 1989 (1989-06-27)

D4: EP-A-0 969 375 (SUN MICROSYSTEMS INC) 5 January 2000 (2000-01-05)

D5: ES-A-2 112 163 (UNI POLITECNICA DE CATALUNYA) 16 March 1998 (1998-03-16)

D6: HANSEN, R. C.: "FUNDAMENTAL LIMITATIONS IN ANTENNAS"; PROCEEDINGS OF THE IEEE, IEEE. NEW YORK, US; FEBRUARY 1981; ISSN 0018-9219, VOL. 2, NR. 69, PAGES 170-182; XP001062381

The applicants' attention is especially drawn to the cited passages of each document cited in the international search report.

1.2 The single independent Claim 1 as filed with applicants' letter of 5.4.2002 reads as follows wherein the identification of the features by letters and the bold printing of optional features are introduced by the International Preliminary Examining Authority in addition:

(a) An antenna in which at least one of its parts is shaped as a space-filling curve (hereafter SFC),

(b) being said SFC defined as a curve composed by at least ten connected straight segments,

(c) wherein said segments are smaller than a tenth of the operating free-space wave length and

(d) they are spatially arranged in such a way that none of said adjacent and connected segments form another longer straight segment,

(e) wherein non of said segments intersect to each other except **optionally** at the tips of the curve,

(f) wherein the corners formed by each pair of said adjacent segments can be **optionally** rounded or smoothed otherwise, and

(g) wherein the curve can be **optionally** periodic along a fixed straight direction of space

(g_1) if and only if the period is defined by a non-periodic curve composed by at least ten connected segments and

(g_2) no pair of said adjacent and connected segments define a straight longer segment.

(h) **Optionally** the antenna includes a network between the radiating element and the input connector or transmission line, being said network either a matching network, an impedance transformer network, a balun network, a filter network, a diplexer network or a duplexer network.

Therefrom follows that only features (a) to (e) form the basic subject matter of Claim 1 whereas the remaining features (f) to (h) form only optional features which may be appended to the basic subject matter of Claim 1 similar to dependent claims.

1.3 Document D1 discloses an antenna and resonator and tuning non-Euclidian antenna ground radials - has fractal-shaped element used to form antenna or element in antenna system or ground counterpoise in antenna system or resonating system or any combination. The antenna is undefined by an opening angle and has at least one element whose physical shape is defined substantially as a deterministic fractal, of iteration N greater than or equal to 2 for at least a portion of the element. The antenna further includes a second element whose physical shape is defined substantially as a fractal, of iteration N' greater than or equal to 2, where (N-N') is greater than or equal to 0.

The fractal is defined as a superposition over at least N=2 iterations of a fractal generator motif. An iteration is a placement of the fractal generator motif upon a base figure, through at least one positioning, selected from the group consisting of (i) rotation, (ii) stretching and (iii) translation.

The antenna of document D1 is used for hand held cellular telephones. The use of fractional antennas lowers the resonant frequencies and widens the bandwidth of the fractal antennas. Moreover, it allows a physical size reduction and a preserving of desired impedance and gain characteristics.

It is was already noted above that in document D1 the special term "fractal antennas" is used, however, the antennas as shown in the figures, e.g. Figs. 5B, 7C1, 7C2, 8B and 8C show a similar construction as the space-filling antennas shown in the figures of the present application (e.g. Figs. 3-7), therefore, it is assumed that they represent the same kind of mathematical curves which are only defined in the

present application in a different way as space-filling curves.
Moreover, in the abstract with Fig. 2 of document D5 there is disclosed a method which displays certain aspects of a computer memory on a display screen in accordance with a fractal curve. In at least one embodiment, the fractal curve is a Hilbert curve. Therefrom it is obvious that a Hilbert curve belongs to the fractal curves.

1.4 Moreover, document D2 discloses a miniaturized cellular telephone antenna having a fractal pattern (e.g. as shown in Fig. 2A) for the same purpose, which shows a similar construction as the space-filling antennas shown in the figures of the present application (e.g. antenna pattern 1 in Fig. 1), therefore it is assumed that they represent the same kind of mathematical curves which are only defined in the present application in a different way as space-filling curves.

1.5 Therefore Claim 1 does not meet the criterion set forth in Article 33 (2) PCT because its subject matter is not new as explained before.

1.6 The additional feature of dependent Claim 18 is also disclosed in document D2 and the additional feature of dependent Claim 19 is also disclosed in document D1, therefore their subject matter cannot be new as well.

2. The present application does not meet the criterion set forth in Article 33 (3) PCT because the subject matter of each of the Claims 3-5 does not involve an inventive step as explained below.

2.1 However, the feature of special shaping the space-filling curve (SFC) as defined in Claims 3 and 4 is already known for the same purpose either from the document D1 (see especially Fig. 8B: fractional antennas 510A, 510B, 510C) or from the document D2 (see especially Fig. 2A and 2B: ZZ curve or Hilbert curve 40A or 40B) or document D4 (see abstract) or from the document D5 (see especially Fig. 1). It is noted that a **space-filling curve** as called in the application is regarded as a **fractal curve** as well as explained above. Therefore, the subject matter of these claims cannot involve an inventive step.

2.2 Moreover, the additional feature in Claim 5 that the antenna includes a network between the radiating element and the input connector or transmission line, being said network either a matching network, an impedance transformer network, a balun network, a filter network, a diplexer network or a duplexer network, belongs to the knowledge of the skilled person when connecting an antenna to a portable telephone.

CLAIMS

1.- An antenna in which at least one of its parts is shaped as a space-filling curve (hereafter SFC), being said SFC defined as a curve composed by at least ten connected straight segments, wherein said segments are smaller than a tenth of the operating free-space wave length and they are spatially arranged in such a way that none of said adjacent and connected segments form another longer straight segment, wherein non of said segments intersect to each other except optionally at the tips of the curve, wherein the corners formed by each pair of said adjacent segments can be optionally rounded or smoothed otherwise, and wherein the curve can be optionally periodic along a fixed straight direction of space if and only if the period is defined by a non-periodic curve composed by at least ten connected segments and no pair of said adjacent and connected segments define a straight longer segment.

2.- An antenna in which at least one of its parts is shaped as a space-filling curve (SFC), according to claim 1, wherein said SFC features a box-counting dimension larger than one, being said box-counting dimension computed as the slope of the straight portion of a log-log graph, wherein such a straight portion is substantially defined as a straight segment over at lease an octave of scales on the horizontal axes of the log-log-graph.

3.- An antenna according to claims 1 or 2, in which at least one of its parts is shaped either as a Hilbert or a Peano curve.

4.- An antenna according to claims 1 or 2, in which at least one of its parts is shaped either as an SZ, ZZ, HilbertZZ, Peanoinc, Peanodec or PeanoZZ curve.

5.- An antenna according to any of the preceding claims, wherein the antenna includes a network between the radiating element and the input connector or transmission line, being said network either a matching network, an impedance transformer network, a balun network, a filter network, a diplexer network or a duplexer network.

6.- An antenna according to any of the preceding claims, wherein the antenna is a dipole antenna comprising two conducting or superconducting arms in which at least a part of at least one of the arms of the dipole is shaped either as an SFC, Hilbert, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ.

7.- An antenna according to any of the claims 1 to 5, wherein the antenna is a monopole antenna comprising a radiating arm and a ground counterpoise in which at least a part of said radiating arm is shaped either as an SFC, Hilbert, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ curve.

8.- An antenna according to any of the claims 1 to 5, wherein the antenna is a slot antenna comprising at least a conducting or superconducting surface, wherein said surface includes a slot, wherein said slot is shaped either as an SFC, Hilbert, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ curve, and wherein said slot can be filled of backed by a dielectric substrate and wherein said conducting or superconducting surface including said slot is either a wall of a waveguide, a wall of a cavity resonator, a conducting film over a glass of a window in a motor vehicle, or part of a metallic structure of the motor vehicle.

9.- An antenna according to any of the claims 1 to 5, wherein the antenna is a loop antenna comprising a conducting or superconducting wire wherein at least a portion of the wire forming the loop is shaped either as an SFC, Hilbert, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ curve.

10.- An antenna according to any of the claims 1 to 5, wherein the antenna is a loop antenna comprising a conducting or superconducting surface with a slot or gap loop impressed on said conducting or superconducting surface, wherein part of the slot or gap loop is shaped either as an SFC, Hilbert, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ curve.

11.- An antenna according to any of the claims 1 to 5, wherein the antenna is a patch antenna comprising at least a conducting or superconducting ground-plane and a conducting or superconducting patch parallel to said ground-plane, in which the perimeter of the patch is shaped either as an SFC, Hilbert, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ curve.

12.- An antenna according to any of the claims 1 to 5, wherein the antenna is a patch antenna in which a slot or aperture on the patch is shaped either as an SFC, Hilbert, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ curve.

13.- An antenna according to any of the claims 1 to 5, wherein the antenna is an aperture antenna comprising at least a conducting or superconducting surface and an aperture on said surface wherein the perimeter of the aperture is shaped either as an SFC, Hilbert, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ curve and wherein said conducting or superconducting surface including aperture or slot is either a wall of a waveguide, a wall of a cavity resonator, a transparent conducting film over a glass of a window in a motor vehicle, or part of metallic structure of the motor vehicle, wherein said slot can be filled of backed by a dielectric substrate.

14.- An antenna according to any of the claims 1 to 5, wherein the antenna is a horn antenna in which the cross-section of the horn is shaped either as an SFC, Hilbert, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ curve.

15.- An antenna according to any of the claims 1 to 5, wherein the antenna is a reflector antenna in which the perimeter of the reflector is shaped either as an SFC, Hilbert, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ curve.

16.- An antenna according to any of the claims 1 to 5, wherein the antenna acts as a frequency selective surface (FSS), the FSS comprising a conducting or superconducting surface, wherein such surface is impressed with at least an slot, being said slot shaped either as an SFC, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ curve.

17.- An antenna according to any of the claims 1 to 5, wherein the antenna acts as a frequency selective surface (FSS), said FSS comprising a dielectric surface in which a conducting or superconducting structure is printed over using any of the manufacturing techniques known in the previous art, the shape of said printed structures being at least partially shaped either as an SFC, Peano, HilbertZZ, SZ, Peanoinc, Peanodec, PeanoZZ, or ZZ curve.

18.- A set of space-filling antennas according to previous claims wherein at least two of the antennas of said antenna set operate at different frequencies to give coverage to different communications services, wherein said antennas in any of the described configurations can be simultaneously fed by means of a distribution or diplexer network respectively.

19.- An antenna according to previous claims characterized in that its size is smaller than the size of a triangular, rectangular, circular, pentagonal or hexagonal antenna in the same monopole, dipole, patch, slot, aperture, horn or reflector configuration operating at the same frequency.

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*:
Description, pages:

1-18 as published

Claims, No.:

1-19 as received on 09/04/2002 with letter of 05/04/2002

Drawings, sheets:

1/25-25/25 as published

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application.

☒ claims Nos. 2.

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 2 are so unclear that no meaningful opinion could be formed (*specify*):
see separate sheet

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the said claims Nos.

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

IV. Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees the applicant has:

☒ restricted the claims.

☐ paid additional fees.

☐ paid additional fees under protest.

☐ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied and chose, according to Rule 68:1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

☐ complied with.

☒ not complied with for the following reasons:
see separate sheet

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

☐ all parts.

☒ the parts relating to claims Nos. 1-5,18,19.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims
	No:	Claims 1,18,19
Inventive step (IS)	Yes:	Claims
	No:	Claims 3,4,5
Industrial applicability (IA)	Yes:	Claims 1-19
	No:	Claims

2. Citations and explanations
see separate sheet

☐ paid additional fees.

☐ paid additional fees under protest.

☐ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

☐ complied with.

☒ not complied with for the following reasons:
see separate sheet

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

☐ all parts.

☒ the parts relating to claims Nos. 1-5,18,19.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims
	No:	Claims 1,18,19
Inventive step (IS)	Yes:	Claims
	No:	Claims 3,4,5
Industrial applicability (IA)	Yes:	Claims 1-19
	No:	Claims

2. Citations and explanations
see separate sheet

INTERNATIONAL SEARCH REPORT

International application No.
PCT/ ES 99/00296

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H01Q 1/36 5/00

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)

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 practicable, search terms used)

EPODOC, WPI, PAJ, CIBEPAT, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	ES 2112163 A (UNIVERSITAT POLITECNICA DE CATALUNYA) 16 March 1998 (16.03.98), The whole document	1,2,5,6,7,9, 12,13,14,16, 17,21
A	HOHLFELD, R.G. & COHEN, N. Self-Similarity and the geometric requirements for frequency independence in antennae. Fractals, Vol. 7, nº 1. Word Scientific. Marzo 1999. Pages 79-84	
A	JAGGARD, D.L. Fractal electrodynamics and modeling. Directions in Electromagnetic Wave Modeling. Proceedings of the International Conference. Bertoni & Felsen. New York, U.S.A. 1991. Pages 435-446	
A	US 4907011 A (KUO) 06 March 1990 (06.03.90)	
A	WO 9706578 A (FRACTAL ANTENNA SYSTEMS) 20 February 1997 (20.02.97)	

☐ 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

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
19 November 1999 (19.11.99)	16 December 1999 (16.12.99)
Name and mailing address of the ISA/ SPTO Facsimile No.	Authorized officer Telephone No.

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/ ES 99/00296

Patent document cited in search report	Publication date	Patent familiy member(s)	Publication date
ES 2112163 A	16.03.1998	ES 2112163 B	16.11.1998
US 4907011A	06.03.1990	NONE	
WO 9706578 A	20.02.1997	EP 0843905 A	27.05.1998

Form PCT/ISA/210 (patent family annex) (July 1992)

INFORME DE BÚSQUEDA INTERNACIONAL

Solicitud internacional nº
PCT/ ES 99/00296

A. CLASIFICACIÓN DEL OBJETO DE LA SOLICITUD

CIP[6] H01Q 1/36, 5/00
De acuerdo con la Clasificación Internacional de Patentes (CIP) o según la clasificación nacional y la CIP.

B. SECTORES COMPRENDIDOS POR LA BÚSQUEDA

Documentación mínima consultada (sistema de clasificación, seguido de los símbolos de clasificación)

CIP[6] H01Q

Otra documentación consultada, además de la documentación mínima, en la medida en que tales documentos formen parte de los sectores comprendidos por la búsqueda.

Bases de datos electrónicas consultadas durante la búsqueda internacional (nombre de la base de datos y, si es posible, términos de búsqueda utilizados)

EPODOC, WPI, PAJ, CIBEPAT, INSPEC

C. DOCUMENTOS CONSIDERADOS RELEVANTES

Categoría*	Documentos citados, con indicación, si procede, de las partes relevantes	Relevante para las reivindicaciones nº
A	ES 2112163 A (UNIVERSITAT POLITECNICA DE CATALUNYA) 16.03.1998, todo el documento	1,2,5,6,7,9,12,13,14,16, 17,21
A	HOHLFELD, R.G. & COHEN, N. Self-Similarity and the geometric requirements for frequency independence in antennae. Fractals, Vol. 7, nº 1. Word Scientific. Marzo 1999. Páginas 79-84	
A	JAGGARD, D.L. Fractal electrodynamics and modeling. Directions in Electromagnetic Wave Modeling. Proceedings of the International Conference. Bertoni & Felsen. New York, U.S.A. 1991. Páginas 435-446	
A	US 4907011 A (KUO) 06.03.1990	
A	WO 9706578 A (FRACTAL ANTENNA SYSTEMS) 20.02.1997	

☐ En la continuación del recuadro C se relacionan otros documentos ☒ Los documentos de familia de patentes se indican en el anexo

* Categorías especiales de documentos citados:

"A" documento que define el estado general de la técnica no considerado como particularmente relevante.

"E" solicitud de patente o patente anterior pero publicada en la fecha de presentación internacional o en fecha posterior.

"L" documento que puede plantear dudas sobre una reivindicación de prioridad o que se cita para determinar la fecha de publicación de otra cita o por una razón especial (como la indicada).

"O" documento que se refiere a una divulgación oral, a una utilización, a una exposición o a cualquier otro medio.

"P" documento publicado antes de la fecha de presentación internacional pero con posterioridad a la fecha de prioridad reivindicada.

"T" documento ulterior publicado con posterioridad a la fecha de presentación internacional o de prioridad que no pertenece al estado de la técnica pertinente pero que se cita por permitir la comprensión del principio o teoría que constituye la base de la invención.

"X" documento particularmente relevante; la invención reivindicada no puede considerarse nueva o que implique una actividad inventiva por referencia al documento aisladamente considerado.

"Y" documento particularmente relevante; la invención reivindicada no puede considerarse que implique una actividad inventiva cuando el documento se asocia a otro u otros documentos de la misma naturaleza, cuya combinación resulta evidente para un experto en la materia.

"&" documento que forma parte de la misma familia de patentes.

Fecha en que se ha concluido efectivamente la búsqueda internacional. 19 Noviembre 1999 (19.11.1999)	Fecha de expedición del informe de búsqueda internacional 16 DIC 1999 16.12.99
Nombre y dirección postal de la Administración encargada de la búsqueda internacional O.E.P.M. C/Panamá 1, 28071 Madrid, España. nº de fax +34 91 3495304	Funcionario autorizado ENRIQUE ROLAN CISNEROS nº de teléfono + 34 91 3495496

Formulario PCT/ISA/210 (segunda hoja) (julio 1998)

INFORME DE BÚSQUEDA INTERNACIONAL
Información relativa a miembros de familias de patentes

Solicitud internacional nº
PCT/ ES 99/00296

Documento de patente citado en el informe de búsqueda	Fecha de publicación	Miembro(s) de la familia de patentes	Fecha de publicación
ES 2112163 A	16.03.1998	ES 2112163 B	16.11.1998
US 4907011A	06.03.1990	NINGUNO	
WO 9706578 A	20.02.1997	EP 0843905 A	27.05.1998

Formulario PCT/ISA/210 (anexo-familias de patentes) (julio 1998)

IPER

PATENT COOPERATION TREATY

EP99974041
REC'D 19 DEC 2001
IPO PCT

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
99297		
International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/ES99/00296	20/09/1999	~~20/09/1999~~
International Patent Classification (IPC) or national classification and IPC		
H01Q1/36		
Applicant		
FRACTUS, S.A. et al.		

EPO - DG 1
04. 02. 2002

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

   ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of 24 sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the report
   - II ☐ Priority
   - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations suporting such statement
   - VI ☐ Certain documents cited
   - VII ☐ Certain defects in the international application
   - VIII ☒ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
20/04/2001	17.12.2001
Name and mailing address of the international preliminary examining authority:	Authorized officer
European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Fanjul Caudevilla, J Telephone No. +49 89 2399 2533

50

Form PCT/IPEA/409 (cover sheet) (January 1994)

~~04/02/2002~~

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/ES99/00296

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*:
Description, pages:

1-20	as received on	26/11/2001	with letter of	15/11/2001

Claims, No.:

1-21	as received on	26/11/2001	with letter of	15/11/2001

Drawings, sheets:

1/13-13/13	as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

   These elements were available or furnished to this Authority in the following language: , which is:

   - ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
   - ☐ the language of publication of the international application (under Rule 48.3(b)).
   - ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

   - ☐ contained in the international application in written form.
   - ☐ filed together with the international application in computer readable form.
   - ☐ furnished subsequently to this Authority in written form.
   - ☐ furnished subsequently to this Authority in computer readable form.
   - ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
   - ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

   - ☐ the description, pages:
   - ☐ the claims, Nos.:

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/ES99/00296

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims 1-21
	No:	Claims
Inventive step (IS)	Yes:	Claims 1-21
	No:	Claims
Industrial applicability (IA)	Yes:	Claims 1-21
	No:	Claims

2. Citations and explanations
see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:
see separate sheet

INTERNATIONAL PRELIMINARY EXAMINATION REPORT - SEPARATE SHEET International application No. PCT/ES99/00296

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. The subject-matter of independent **claim 1** concerns an antenna comprising at least a multilevel structure formed by a set of the same type of geometric elements.

   The closest prior art is given by **D1: ES-A-2112163,** which discloses an antenna designed according to the principles of fractal geometry. The antenna has a self-similar structure resulting from the repetition of a geometrical motif or generator, that is replicated using rotation, translation or scaling.

   The antenna defined in claim 1 differs from that of D1 in that the geometry of the resulting structure of the antenna is different from the geometry of the polygons or polyhedrons which form it. This feature allows to overcome the limitations associated to the application of the fractal theory to the design of real antennas with a limited number of components.

   Such a solution is not anticipated or rendered obvious by the available prior art. Claim **1** accordingly is considered novel and to involve an inventive step (Article 33 (2), (3) PCT).

2. Dependent claims **2-21** contain further details of the antenna of claim 1. As they are dependent on claim 1, they also satisfy the requirements for novelty and inventive step (Article 33 (2), (3) PCT).

Re Item VIII

Certain observations on the international application

1. The feature of claim 1, that "the multilevel structure and the polygons or polyhedrons which form it have different geometry" is vague and leaves the reader in doubt as to the meaning of the technical feature to which it refers. The

INTERNATIONAL PRELIMINARY EXAMINATION REPORT - SEPARATE SHEET International application No. PCT/ES99/00296

term "different geometry" can be understood in different ways. For example, it could mean that the structure and the polygons or polyhedrons have different number of sides, that they do not consist of the same scaled shape, etc. As a consequence, the definition of the subject-matter of the claim is rendered unclear (Article 6 PCT).

2. The feature of claim 1, that "the multilevel structure and the polygons or polyhedrons which form it have different geometry", is not referred to in the description. Claim 1 is therefore not supported by the description as required by Article 6 PCT.

3. Some of the embodiments of the invention shown in figures 1-7 do not fall within the scope of the claims, since the resulting antenna structure has the same geometry of the generating motif (see in particular fig. 3.1-3.5 (triangles), 4.1-4.6 (squares), etc.). This inconsistency between the claims and the description leads to doubt concerning the matter for which protection is sought, thereby rendering the claims unclear (Article 6 PCT).

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 12/228,487	Filing Date 08/13/2008	☐ To be Mailed

APPLICATION AS FILED – PART I

	(Column 1)	(Column 2)	SMALL ENTITY ☐		OR	OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE ($)	FEE ($)		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

		(Column 1)		(Column 2)	(Column 3)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
AMENDMENT	03/30/2011	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 15	Minus	** 20	= 0	X $ =		OR	X $52=	0
	Independent (37 CFR 1.16(h))	* 1	Minus	***3	= 0	X $ =		OR	X $220=	0
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	0

		(Column 1)		(Column 2)	(Column 3)					
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
/LAJUAN HICKSON/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

61060 7590 05/25/2011

WINSTEAD PC
P.O. BOX 50784
DALLAS, TX 75201

EXAMINER
NGUYEN, HOANG V

ART UNIT	PAPER NUMBER
2821	

DATE MAILED: 05/25/2011

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/228,487	08/13/2008	Jaume Anguera Pros	47005-P018WUSC1	6222

TITLE OF INVENTION: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1510	$300	$0	$1810	08/25/2011

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PTOL-85 (Rev. 02/11)

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

61060 7590 05/25/2011

WINSTEAD PC
P.O. BOX 50784
DALLAS, TX 75201

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)

(Signature)

(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/228,487	08/13/2008	Jaume Anguera Pros	47005-P018WUSC1	6222

TITLE OF INVENTION: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1510	$300	$0	$1810	08/25/2011

EXAMINER	ART UNIT	CLASS-SUBCLASS
NGUYEN, HOANG V	2821	343-7000MS

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:

❑ Issue Fee

❑ Publication Fee (No small entity discount permitted)

❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): (**Please first reapply any previously paid issue fee shown above**)

❑ A check is enclosed.

❑ Payment by credit card. Form PTO-2038 is attached.

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

❑ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

❑ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/228,487	08/13/2008	Jaume Anguera Pros	47005-P018WUSC1	6222

61060 7590 05/25/2011

WINSTEAD PC
P.O. BOX 50784
DALLAS, TX 75201

EXAMINER	
NGUYEN, HOANG V	
ART UNIT	PAPER NUMBER
2821	

DATE MAILED: 05/25/2011

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 291 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 291 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No.	Applicant(s)	
	12/228,487	PROS ET AL.	
	Examiner	Art Unit	
	HOANG V. NGUYEN	2821	

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

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *RCE filed on 3/30/2011*.

2. ☒ The allowed claim(s) is/are *16-60*.

3. ☐ 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 the:
      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)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 3/30/11
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/HOANG V NGUYEN/
Primary Examiner, Art Unit 2821

Allowable Subject Matter

1. Claims 16-60 are allowed.

2. The following is an examiner's statement of reasons for allowance:

Regarding claim 16, none of the prior art of record, either taken alone or in combination, fairly teaches or suggests a mobile communication device comprising at least a multi-band antenna capable of operating at multiple frequency bands, the multi-band antenna including an antenna element; wherein the antenna element operates in cooperation with the ground plane layer; the antenna element comprising a common conductor; a first radiating arm connected to the common conductor; a second radiating arm connected to the common conductor; wherein the common conductor includes a feeding port, the feeding port being coupled to the feeding point; wherein at least a portion of the first radiating arm and at least a portion of the second radiating arm are arranged on different planes; wherein the first radiating arm is at least partially shaped according to a grid-dimension curve.

Claims 17-29 are allowed for depending on claim 16.

Regarding claim 30, none of the prior art of record, either taken alone or in combination, fairly teaches or suggests a mobile communication device comprising at least a multi-band antenna capable of operating at multiple frequency bands, the multi-band antenna including an antenna element; wherein the antenna element is coupled to the feeding point and operates in cooperation with the ground plane layer; the antenna element comprising a first conductor, the first conductor comprising a first radiating arm having a grid-dimension section shaped according to a grid-dimension curve; a second conductor arranged at a predetermined distance

from the first conductor and electromagnetically coupled to the first conductor, the second conductor comprising a planar section.

Claims 31-45 are allowed for depending on claim 30.

Regarding claim 46, none of the prior art of record, either taken alone or in combination, fairly teaches or suggests a mobile communication device comprising at least a multi-band antenna capable of operating at multiple frequency bands, the multi-band antenna including a dielectric mounting structure having a plurality of surfaces; an antenna element, the antenna element being coupled to the feeding point and operating in cooperation with the ground plane layer; wherein the antenna element comprises a first radiating arm arranged on two or more surfaces of the plurality of surfaces of the dielectric mounting structure; the first radiating arm comprising a first section shaped according to a grid-dimension curve; a second section connected to the grid-dimension section, the second section having a width different from a width of the first section; and wherein the printed circuit board, the communication circuitry, and the multi-band antenna are arranged inside the device housing.

Claims 47-60 are allowed for depending on claim 46.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Inquiry

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, Jacob Y. Choi can be reached on (571) 272-2367. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/HOANG V NGUYEN/
Primary Examiner, Art Unit 2821

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	12228487
Filing Date	2008-08-13
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	Nguyen, Hoang V
Attorney Docket Number	47005-P018WUSC1

FORM 1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5986609		1999-11-16	Spall	
	2	4907011		1990-03-06	Kuo	
	3	7015868		2006-03-21	Puente	
	4	7123208		2006-10-17	Puente	
	5	7202822		2007-04-10	Baliarda	
	6	7312762		2007-12-25	Puente	
	7	7394432		2008-07-01	Baliarda	
	8	7397431		2008-07-08	Baliarda	

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	1	20040009755		2004-01-15	Yoshida	
	2	20090109101		2009-04-30	Baliarda	

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FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	05007109	JP		1993-01-14	Yasuhiro		☐
	2	1258054	EP		2005-08-15	Puente		☐
	3	199735360	WO		1997-09-25	Ball Aerospace & Technologies Corp.		☐

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	Declaration of Jeffery D. Baxter - Including Exhibits regarding US patent 7411556 Defendants 20100730	☐

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	2	Dubost , G. Wideband flat dipole and short-circuit microstrip patch elements and arrays. In Handbook of microstrip antennas - Chapter 7. Peter Peregrinus Ltd. James , J. R. ; Hall , P. S. (ed.) 1989	☐
	3	NA. Nokia 8260 - FCC ID GMLNSW-4DX. April 1999.	☐
	4	Rudge, A. W. The handbook of antenna design. Peter Peregrinus, 1986.	☐
	5	Borja , C. ; Puente , C. Iterative network models to predict the performance of Sierpinski fractal antennas and networks. Antennas and Propagation Society International Symposium, 1999.	☐
	6	Campos, O. Study of multiband and miniature fractal antennas. Universitat Politècnica de Catalunya, 1998	☐
	7	Cristal , E. G. et al. Hairpin-line and hybrid hairpin-line / Half-wave parallel-coupled-line filers. IEEE Transactions on Microwave Theory and Techniques. November, 1972	☐
	8	Hohlfeld , R. G. ; Cohen N. Self-similarity and the geometric requirements for frequency independence in antennae. Fractals, 1999.	☐
	9	Jaggard , D. L. Fractal electrodynamics and modeling. Directions in electromagnetic wave modeling,1991	☐
	10	Lee , B. T. Office action for the US patent application 10/181790 dated on August 27, 2004	☐
	11	Lee , B. T. Office action for the US patent application 10/181790 dated on June 2, 2005	☐
	12	Lee , B. T. Response to office action for the US patent application 10/181790 dated on August 27, 2004	☐

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	13	Lee , B.T. Office action for the US patent application 10/181790 dated on March 2, 2005	☐
	14	Lee , Benny T. Office action for the US patent application 10/181790 dated on August 4, 2005	☐
	15	Maiorana , D. Amendment and response to the Office Action dated on January 23, 2004 of US patent application 10/102568	☐
	16	Mandelbrot, B. The fractal geometry of nature. Freeman and Company. 1983	☐
	17	Matthaei , George L. et al. Hairpin-comb filters for HTS and other narrow-band applications. IEEE Transactions on Microwave Theory and Techniques, August, 1997	☐
	18	Matthaei , George L. Microwave filters impedance-matching networks and coupling structures. Artech House. 1980	☐
	19	Mithani , S. Response to the Office Action dated March 12, 2007 of US patent application no. 11/021597	☐
	20	NA. International preliminary examination report of PCT/EP00/00411. European Patent Office (EPO). August, 2002	☐
	21	NA. Nokia 8290. 2010	☐
	22	NA. Office action for the Chinese patent application 01823716 dated on February 16, 2007	☐
	23	NA. Office action for the Chinese patent application 01823716 dated Setember 21, 2007	☐

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	24	NA. Response to the office action dated on February 16, 2007 for the Chinese patent application 01823716	☐
	25	Nguyen , H. Notice of Allowance of US patent application no. 12/347462 dated on May 18, 2009	☐
	26	Nguyen , H. Office Action of US patent application no. 12/347462 dated on October 28, 2009	☐
	27	Nguyen , H. Office Action of US patent application number 10/182635 dated December 13, 2004	☐
	28	Nguyen, H. Notice of Allowance of US patent application no. 11/110052 dated on May 30, 2006	☐
	29	Peitgen , H. ; Jürgens , H. ; Saupe , D. Chaos and Fractals: New frontiers of Science - Pag 8-9 No date available.	☐
	30	Rolan Cisneros, E. International Search Report for the PCT patent application ES99/00296. OEPM. March, 2001	☐
	31	Sauer , J. Amendment and response to office action dated December 13, 2004 of US patent application no. 10/182635	☐
	32	Sauer , J. Amendment and response to office action dated October 04, 2004 of US patent application no. 10/182635	☐
	33	Sauer , J. M. Response to the office action from US patent application 10/181790 dated March 2, 2005	☐
	34	Sauer , J. M. Response to the Office Action mailed on January 26, 2006 and Advisory Action mailed on March 29, 2006 for the US patent application 10/422578	☐

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	35	Sauer, J.M. Response to the office action from US patent application 10/181790 dated June 2, 2005	☐
	36	Soler , J. ; Romeu , J. ; Puente , C. Mod-P Sierpinski fractal multiband antenna. Antennas and Propagation Society International Symposium, 2000	☐
	37	Tinker J. A. Response to the office action dated October 30, 2007 of US patent application no. 11/021597	☐
	38	Wimer , M. C. Office Action for the US patent application 10/422578 dated on August 23, 2007	☐
	39	Wimer , M. C. Office Action for the US patent application 10/422578 dated on January 26, 2006	☐
	40	Wimer , M. C. Office Action for the US patent application 10/422578 dated on March 12, 2007	☐
	41	Wimer , M. C. Office action for the US patent application 10/422578 dated on March 26, 2008	☐
	42	Wimer , M. C. Office Action for the US patent application 11/021597 dated on March 12, 2007	☐
	43	Wimer , M. C. Office Action for US Patent Application No 10/422578 dated on June 23, 2005	☐
	44	Wimer , M. Office action of US patent application no. 11/021597 dated October 30, 2007	☐
	45	Zhang , Dawei ; Liang , G.C. ; Shih , C.F. Narrowband lumped element microstrip filters using capacitively loaded inductors. Microwave Symposium Digest, 1995	☐

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	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	46	Defendants LG Electronics Mobilecomm USA., Inc.'s answer and counterclaim to complaint. LG Electronics Mobilecomm USA., Inc. January 10 2010	☐
	47	Defendant Pantech Wireless, INC.'S answer, affirmative defenses and counterclaims to Fractus SA' s Amended complaint. Pantech Wireless, Inc. June 4 2009	☐
	48	Defendant UTStarcom, Inc.'s answer, affirmative defenses, and counterclaims to plaintiff's amended complaint. UTStarcom, Inc. June 8 2009	☐
	49	Answer, affirmative defenses and counterclaims to the amended complaint for patent infringement on behalf of Defendant Personal Communications Devices Holdings, LLC. July 20, 2009	☐
	50	Defendant Sanyo North America Corporation's partial answer to amended complaint for patent infringement. Sanyo North America Corporation. July 20, 2009	☐

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Doc description: Information Disclosure Statement (IDS) Filed

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FORM 2

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

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	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	1	Kyocera Communications Inc's answer, affirmative defenses and counterclaims to plantiff's amended complaint. Kyocera Communications Inc. July 21, 2009	☐
	2	Kyocera Wireless Corp's answer, affirmative defenses and counterclaims to plantiff's amended complaint. Kyocera Wireless Corp. July 21, 2009	☐
	3	Palm Inc.'s answer, affirmative defenses and counterclaims to plaintiff's amended complaint. Palm Inc. July 21, 2009	☐
	4	Defendant HTC Corporation's answer and counterclaim to plaintiff's amended complaint. HTC Corporation. September 25, 2009	☐
	5	Defendant HTC America Inc's answer and counterclaim to plaintiff's amended complaint. HTC America Inc. September 25, 2009	☐
	6	Defendants Samsung Electronics Co., Ltd.'s; Samsung Electronics Research Institute's and Samsung Semiconductor Europe GMBH' s answer; and Samsung Telecommunications America LLC' s answer and counterclaim to the amended complaint of plaintiff Fractus, SA. October 1, 2009	☐
	7	Defendants Research in Motion LTD, and Research in Motion Corporation's answers, defenses and counterclaims to plaintiff's amended complaint. October 1, 2009	☐
	8	Defendants LG Electronics Inc., LG Electronics USA, Inc., and LG Electronics Mobilecomm USA Inc. answer and counterclaim to amended complaint. October 1, 2009	☐
	9	Defendants HTC America, Inc's first amended answer and counterclaims to plaintiff's amended complaint. October 2, 2009	☐
	10	Defendants Research in Motion LTD, and Research in Motion Corporation's amended answer, defenses and counterclaims to plaintiff's amended complaint. November 24, 2009	☐
	11	Answer, affirmative defenses and counterclaims to the second amended complaint for patent infringement on behalf of Defendant Personal Communications Devices Holdings, LLC. December 17, 2009	☐

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	12	Defendant HTC America, Inc's answer and counterclaims to plaintiff's second amended complaint. December 21, 2009	☐
	13	Defendant HTC Corporation's answer and counterclaims to plaintiff's second amended complaint. December 21, 2009	☐
	14	Defendant Research in Motion LTD and Research in Motion Corporation's second answer, defenses and counterclaims to plaintiff's second amended complaint. December 21, 2009	☐
	15	Defendant Pantech Wireless, Inc's answer, affirmative defenses and counterclaims to Fractus SA's second amended complaint. December 21, 2009	☐
	16	Defendant Sanyo Electric Co. LTD's answer to second amended complaint for patent infringement. December 22, 2009	☐
	17	Defendant Sanyo North America Corporation's answer to second amended complaint for patent infringement. December 22, 2009	☐
	18	Defendant UTStarcom, Inc's answer, affirmative defenses and counterclaims to Fractus SA's second amended complaint. December 22, 2009	☐
	19	Palm, Inc's answer, affirmative defenses and counterclaims to paintiff's second amended complaint. December 22, 2009	☐
	20	Kyocera Communications Inc's answer, affirmative defenses and counterclaims to paintiff's second amended complaint December 22, 2009	☐
	21	Kyocera Wireless Corp's answer, affirmative defenses and counterclaims to paintiff's second amended complaint December 22, 2009	☐
	22	Defendants Samsung Electronics Co., Ltd.'s; Samsung Electronics Research Institute's and Samsung Semiconductor Europe GMBH' s answer; and Samsung Telecommunications America LLC' s answer and counterclaim to the second amended complaint of plaintiff Fractus, SA. December 23, 2009	☐

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	23	Defendants LG Electronics Inc., LG Electronics USA, Inc., and LG Electronics Mobilecomm USA Inc. answer and counterclaim to second amended complaint. December 28, 2009	☐
	24	Answer of the Sharp Defendants to plaintiff's second amended complaint. December 29, 2009	☐
	25	Amended answer of the Sharp defendants to plaintiff's second amended complaint. February 24, 2010	☐
	26	Defendants Samsung Electronics Co., Ltd.'s; Samsung Electronics Research Institute's and Samsung Semiconductor Europe GMBH' s first amended answer; and Samsung Telecommunications America LLC' s first amended answer and counterclaim to the second amended complaint of plaintiff Fractus, SA. February 24, 2010	☐
	27	Defendants LG Electronics Inc., LG Electronics USA, Inc., and LG Electronics Mobilecomm USA Inc. First amended answer and counterclaim to second amended complaint. January 24, 2010	☐
	28	Defendant HTC America, Inc.'s amended answer and counterclaim to plaintiff's second amended complaint. February 24, 2010	☐
	29	Defendant HTC Corporation's amended answer and counterclaim to plaintiff's second amended complaint. February 24, 2010	☐
	30	Defendant HTC Corporation's amended answer and counterclaim to plaintiff's second amended complaint. February 25, 2010	☐
	31	Defendant HTC America, Inc.'s amended answer and counterclaim to plaintiff's second amended complaint. February 25, 2010	☐
	32	Fractus's answer to defendant Pantech Wireless Inc. in the case of Fractus SA vs. Samsung Electronics cp. 24, June 2009	☐
	33	Fractus's answer to defendant UT Starcom, Inc. counterclaims. in the case of Fractus SA vs. Samsung Electronics cp. 29, June 2009	☐

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	34	Complaint for patent infringement - Case 6:09-cv-00203. Fractus. May 5, 2009	☐
	35	Civil cover sheet - Case 6:09-cv-00203. Fractus. May 5, 2009	☐
	36	Amended complaint for patent infringement - Case 6:09-cv-00203. May 6, 2009	☐
	37	Second amended complaint for patent infringement - Case 6:09-cv-00203. December 2, 2009	☐
	38	Second amended complaint for patent infringement - Case 6:09-cv-00203. December 8, 2009	☐
	39	Plaintiff Fractus, S. A.'s answer to defendant personal communications devices holdings, LLC's counterclaims to the Second Amended Complaint - Case 6:09-cv-00203. January 4, 2010	☐
	40	Plaintiff Fractus, S. A.'s answer to the counterclaims of defendants Research in Motion LTD. and Research in Motion Corporation to the Second Amended Complaint - Case 6:09-cv-00203. January 4, 2010	☐
	41	Plaintiff Fractus, S. A.'s answer to counterclaims of defendant Pantech Wireless, Inc. to the Second Amended Complaint - Case 6:09-cv-00203. January 4, 2010	☐
	42	Plaintiff Fractus, S. A.'s answer to counterclaims of defendant Kyocera Communications, Inc's Counterclaims to the Second Amended Complaint - Case 6:09-cv-00203. January 4, 2010	☐
	43	Plaintiff Fractus, S. A.'s answer to defendant Kyocera Wireless Corp's Counterclaims to the Second Amended Complaint - Case 6:09-cv-00203. January 4, 2010	☐
	44	Plaintiff Fractus, S. A.'s answer to defendant Palm, Inc's Counterclaims to the Second Amended Complaint - Case 6:09-cv-00203. January 4, 2010	☐

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	45	Plaintiff Fractus, S. A.'s answer to defendant UTStarcom, Inc's Counterclaims to the Second Amended Complaint - Case 6:09-cv-00203. January 4, 2010	☐
	46	Plaintiff Fractus, S. A.'s answer to counterclaims of defendant Samsung Telecommunications America LLC to the Second Amended Complaint - Case 6:09-cv-00203. January 4, 2010	☐
	47	Plaintiff Fractus, S. A.'s answer to counterclaims of defendants LG Electronics Inc., Electronics USA, Inc., and LG Electronics Mobilecomm USA, Inc. to the Second Amended Complaint - Case 6:09-cv-00203. January 4, 2010	☐
	48	Plaintiff Fractus, S. A.'s answer to counterclaims of defendants HTC America, Inc to the Second Amended Complaint - Case 6:09-cv-00203. January 14, 2010	☐
	49	Plaintiff Fractus, S. A.'s answer to amended counterclaims of defendant Samsung Telecommunications america LLC's to Fractus's Second Amended Complaint - Case 6:09-cv-00203. April 1, 2010	☐
	50	Plaintiff Fractus, S. A.'s answer to amended counterclaims of defendant HTC Corporation to Fractus's Second Amended Complaint - Case 6:09-cv-00203. April 1, 2010	☐

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FORM 3

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	1	Plaintiff Fractus, S. A.'s answer to amended counterclaims of defendant HTC America, Inc. To Fractus's Second Amended Complaint - Case 6:09-cv-00203. April 1, 2010	☐
	2	Plaintiff Fractus, S. A.'s answer to amended counterclaims of defendant LG Electronics Inc., LG Electronics USA, Inc., and LG Electronics Mobilecomm USA Inc's to Fractus's Second Amended Complaint - Case 6:09-cv-00203. April 1, 2010	☐
	3	Love , J. D. Memorandum opinion and order. Court 20110120	☐
	4	NA. Defendant's notice of compliance regarding second amended invalidity contentions. Defendants 20110121	☐
	5	NA. Fractus' reply to defendant's motion for reconsideration of, and objections to, magistrate Judge Love's markman order. Fractus 20110204	☐
	6	NA. Declaration of Thomas E. Nelson - Exhibit A - Antenna photos. Defendants 20110203	☐
	7	NA. Report and recommendation of United States magistrate judge. Court 20110208	☐
	8	NA. Order adopting report and recommendation of magistrate judge. Court 20110211	☐
	9	NA. Notice of compliance with motion practice orders. Fractus 20110214	☐
	10	NA. Defendants LG Electronics Inc, LG Electronics USA, and LG Electronics Mobilecomm USA Inc's second amended answer and counterclaim to second amended complaint. Defendants 20110228	☐
	11	NA. Reply brief in support of Defendant's motion for reconsideration of the court's ruling on the term "at least a portion" in the court's December 17, 2010 claim construction order based on newly-available evidence. Defendants 20110225	☐

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	Attorney Docket Number	47005-P018WUSC1

	12	NA. Defendants Samsung Electronics Co LTD (et al) second amended answer and counterclaims to the second amended complaint of plaintiff Fractus SA. Defendants 20110228	☐
	13	NA. Defendant Pantech Wireless Inc amended answer, affirmative defenses, and counterclaims to Fractus' second amended complaint. Defendants 20110228	☐
	14	LITIGATION - Invalidity Contentions - Defendants Defendants Invalidity contentions including apendix and exhibits refering Multiband Monopole. Defendants 20100208	☐
	15	Infringement Chart - Kyocera MARBL. Patent: 7411556 Fractus 20091105	☐
	16	Infringement Chart - Kyocera S2400. Patent: 7411556 Fractus 20091105	☐
	17	Infringement Chart - Kyocera NEO E1100. Patent: 7411556 Fractus 20091105	☐
	18	Infringement Chart - LG Shine CU720. Patent: 7411556 Fractus 20091105	☐
	19	Infringement Chart - LG Rumor. Patent: 7411556 Fractus 20091105	☐
	20	Infringement Chart - LG Voyager VX10000. Patent: 7411556 Fractus 20091105	☐
	21	Infringement Chart - LG VX8350. Patent: 7411556 Fractus 20091105	☐
	22	Infringement Chart - LG Vu CU920. Patent: 7411556 Fractus 20091105	☐

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	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	23	Infringement Chart - LG VX5400. Patent: 7411556 Fractus 20091105	☐
	24	Infringement Chart - LG VX5500. Patent: 7411556 Fractus 20091105	☐
	25	Infringement Chart - LG AX8600. Patent: 7411556 Fractus 20091105	☐
	26	Infringement Chart - LG Flare LX165. Patent: 7411556 Fractus 20091105	☐
	27	Infringement Chart - LG Aloha LX140. Patent: 7411556 Fractus 20091105	☐
	28	Infringement Chart - LG Chocolate VX8550. Patent: 7411556 Fractus 20091105	☐
	29	Infringement Chart - LG Muziq LX570. Patent: 7411556 Fractus 20091105	☐
	30	Infringement Chart - LG VX9400. Patent: 7411556 Fractus 20091105	☐
	31	Infringement Chart - LG VX8560 Chocolate 3. Patent: 7411556 Fractus 20091105	☐
	32	Infringement Chart - LG EnV3 VX9200. Patent: 7411556 Fractus 20091105	☐
	33	Infringement Chart - LG Lotus. Patent: 7411556 Fractus 20091105	☐

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	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	34	Infringement Chart - LG AX155. Patent: 7411556 Fractus 20091105	☐
	35	Infringement Chart - LG enV Touch VX1100. Patent: 7411556 Fractus 20091105	☐
	36	Infringement Chart - LG AX380. Patent: 7411556 Fractus 20091105	☐
	37	Infringement Chart - LG VX8360. Patent: 7411556 Fractus 20091105	☐
	38	Infringement Chart - Pantech Breeze C520. Patent: 7411556 Fractus 20091105	☐
	39	Infringement Chart - Patench DUO C810. Patent: 7411556 Fractus 20091105	☐
	40	Infringement Chart - Blackberry 8110. Patent: 7411556 Fractus 20091105	☐
	41	Infringement Chart - Blackberry 8120. Patent: 7411556 Fractus 20091105	☐
	42	Infringement Chart - Blackberry 8310. Patent: 7411556 Fractus 20091105	☐
	43	Infringement Chart - Blackberry 8330. Patent: 7411556 Fractus 20091105	☐
	44	Infringement Chart - Blackberry 8130. Patent: 7411556 Fractus 20091105	☐

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	45	Infringement Chart - Blackberry 8320. Patent: 7411556 Fractus 20091105	☐
	46	Infringement Chart - Blackberry 8220. Patent: 7411556 Fractus 20091105	☐
	47	Infringement Chart - Blackberry 8100. Patent: 7411556 Fractus 20091105	☐
	48	Infringement Chart - Blackberry 8820. Patent: 7411556 Fractus 20091105	☐
	49	Infringement Chart - Blackberry 8830. Patent: 7411556 Fractus 20091105	☐
	50	Infringement Chart - Samsung SCH-R500. Patent: 7411556 Fractus 20091105	☐

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Examiner Signature	/Hoang Nguyen/	Date Considered	05/19/2011

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Attorney Docket Number	47005-P018WUSC1

FORM 4

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7095372		2006-08-22	Soler	
	2	7463199		2008-12-09	Soler	

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U.S.PATENT APPLICATION PUBLICATIONS

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	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T5
	1	Infringement Chart - Samsung M320. Patent: 7411556 Fractus 20091105	☐
	2	Infringement Chart - Samsung SCH U340. Patent: 7411556 Fractus 20091105	☐
	3	Infringement Chart - Samsung SCH U410. Patent: 7411556 Fractus 20091105	☐
	4	Infringement Chart - Samsung SCH-R430. Patent: 7411556 Fractus 20091105	☐
	5	Infringement Chart - Samsung SCH U700. Patent: 7411556 Fractus 20091105	☐
	6	Infringement Chart - Samsung SCH-U940. Patent: 7411556 Fractus 20091105	☐
	7	Infringement Chart - Samsung SGH A117. Patent: 7411556 Fractus 20091105	☐
	8	Infringement Chart - Samsung SCH A127. Patent: 7411556 Fractus 20091105	☐
	9	Infringement Chart - Samsung SGH T229. Patent: 7411556 Fractus 20091105	☐
	10	Infringement Chart - Samsung SGH T439. Patent: 7411556 Fractus 20091105	☐

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	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	11	Infringement Chart - Samsung SGH T919. Patent: 7411556 Fractus 20091105	☐
	12	Infringement Chart - Samsung SGH-A437. Patent: 7411556 Fractus 20091105	☐
	13	Infringement Chart - Samsung SGH A867. Patent: 7411556 Fractus 20091105	☐
	14	Infringement Chart - Samsung SCH-U310. Patent: 7411556 Fractus 20091105	☐
	15	Infringement Chart - Samsung SGH-A237. Patent: 7411556 Fractus 20091105	☐
	16	Infringement Chart - Samsung SGH-T639. Patent: 7411556 Fractus 20091105	☐
	17	Infringement Chart - Samsung SGH-A837. Patent: 7411556 Fractus 20091105	☐
	18	Infringement Chart - Samsung SCH-R600. Patent: 7411556 Fractus 20091105	☐
	19	Infringement Chart - Samsung SCH-U520. Patent: 7411556 Fractus 20091105	☐
	20	Infringement Chart - Samsung SCH-U750. Patent: 7411556 Fractus 20091105	☐
	21	Infringement Chart - Samsung SGH-T219. Patent: 7411556 Fractus 20091105	☐

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	22	Infringement Chart - Samsung SGH-T929. Patent: 7411556 Fractus 20091105	☐
	23	Infringement Chart - Samsung SCH-A645. Patent: 7411556 Fractus 20091105	☐
	24	Infringement Chart - Samsung FlipShot SCH-U900. Patent: 7411556 Fractus 20091105	☐
	25	Infringement Chart - Samsung SGH-A257. Patent: 7411556 Fractus 20091105	☐
	26	Infringement Chart - Samsung SGH-T559. Patent: 7411556 Fractus 20091105	☐
	27	Infringement Chart - Samsung SPH-M550. Patent: 7411556 Fractus 20091105	☐
	28	Infringement Chart - Sanyo Katanna II. Patent: 7411556 Fractus 20091105	☐
	29	Infringement Chart - Sanyo Katana LX. Patent: 7411556 Fractus 20091105	☐
	30	Infringement Chart - Sharp Sidekick LX. Patent: 7411556 Fractus 20091105	☐
	31	Infringement Chart - UTStarcom CDM7126. Patent: 7411556 Fractus 20091105	☐
	32	Defendant's reply in suport of their motion for summary judgment of invalidity based on indefiniteness and lack of written description for certain terms Defendants 20100830	☐

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	Attorney Docket Number	47005-P018WUSC1

	33	NA. Expert declaration by Dr. D. Jaggard including exhibits (curriculum and datasheets from Cushcraft, Antenova, Ethertronics and Taoglas) Fractus 20100816	☐
	34	NA. Fractus's opposition to defendants' motion for summary judgement of invalidity based on indefiniteness and lack of written description for certain terms Fractus 20100816	☐
	35	Howe , M. Declaration of Micah Howe in support of Fractus SA opposition to defendants' motion for summary judgement of invalidity based on indefiniteness and lack of written description for certain terms Heim , Payne and Chorus LLP 20100816	☐
	36	NA. IEEE Standard Dictionary of Electrical and Electronics. Terms IEEE Press (6th ed.) pages 359, 688, and 878 19960101	☐
	37	Werner , D. H and Mittra , R. Frontiers in electromagnetics. IEEE Press. pages 5-7 20000101	☐
	38	Nelson , Thomas R. ; Jaggard , Dwight L. Fractals in the Imaging Sciences J. Optical Society AM. 19990101	☐
	39	Stutzman , W. ; Thiele , G. Antenna theory and design. John Wiley and Sons. Pags. 18, 36 19810101	☐
	40	Jaggard , D. Diffraction by Bandlimited Fractal Screens. Optical Society AM 19870601	☐
	41	Feder, J. Fractals. Plenum Press. pages 10-11, 15-17, and 25 19880101	☐
	42	Fleishmann , M. ; Tildesley , DJ ; Balls , RC. Fractals in the natural sciences. Royal Society of London 19990101	☐
	43	Kritikos , H.N. ; Jaggard , D.L. Recent advances in electromagnetic theory - Chapter 6 On fractal electrodynamics. Springer - Verlag. Chapter 6 19901001	☐

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	44	Caswell , W. E. Invisible errors in dimensions calculations: geometric and systematic effects Dimensions and Entropies in Chaotic Systems 19860101	☐
	45	NA. European Patent Convention - Article 123 European Patent Office 20000101	☐
	46	Kyriacos , S. ; Buczkowski , S. et al. A modified box-counting method Fractals - World Scientific Publishing Company 19940101	☐
	47	Carpintero , F. Reply to the Written Opinion for the PCT patent application ES99/00296 dated on November 15, 2001 Herrero & Asociados 20011115	☐
	48	Werner , D. H. et al. Frontiers in Electromagnetics - Chapter 3 - The Theory and design of fractal antenna arrays IEEE Press Series 20000101	☐
	49	Balanis, Constantine A. Antenna theory - Analysis and design - Chapter 2 - Fundamental parameters of antennas John Wiley & Sons 19820101	☐
	50	Sauer , J. M. Preliminary amendment for the US patent application 10/963080 Jones Day. Case 6:09-cv-00203-LED-JDL 20041210	☐

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FORM 5

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7342553		2008-03-11	SOLER	

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U.S.PATENT APPLICATION PUBLICATIONS

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	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	1	NA. Merriam-Webster's Collegiate Dictionary (1993) Merriam-Webster's. Case 6:09-cv-00203-LED-JDL 19930101	☐
	2	Chen , Z. N. Broadband probe-fed L-shaped plate antenna Microwave and Optical Technology Letters 20000805	☐
	3	NA. American Heritage College Dictionary (1997). Pags 340 and 1016 Mifflin Comp. Case 6:09-cv-00203-LED-JDL 19970101	☐
	4	Buczkowski , Stéphane ; Kyriacos. The modified box-countig method: analysis of some characteristic paramenters. Pattern Recognition 19980420	☐
	5	Wolin , H. A. Preliminary Amendment of U.S. Application 10/102568 Rosenman & Colin LLP 20020312	☐
	6	Menefee , J. Office Action for the US patent reexamination 95/001390 dated Aug. 12, 2010 USPTO 20100812	☐
	7	Menefee , James. Office Action for the US patent reexamination 95/001389 dated on August 12, 2010 USPTO 20100812	☐
	8	Phan , T. Office Action for US Patent Application No 10/102568 dated on January 23, 2004 USPTO 20040123	☐
	9	Fractus vs. Samsung et al. Claim construction and motion for summary judgement - Markman Hearing - [Defendants] Defendants 20100902	☐
	10	Fractus' Claim Construction Presentation - Markman Hearing - Fractus v. Samsung et al. 609-cv-00203 September 2,2010 20100902	☐
	11	Love , J. Memorandum order and opinion. Court 20101217	☐

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	12	Gianvittorio , John Paul et al. Fractal antennas - a novel antenna miniturization technique and applications Antennas and Propagation Magazine, IEEE 20020201	☐
	13	Best , Steven R. The fractal loop antenna: a comparison of fractal and non-fractal geometries Antennas and Propagation Society International Symposium, 2001. IEEE 20010101	☐
	14	Romeu , J. et al. Fractal FSS - A novel dual-band frequency selective surface Antennas and Propagation, IEEE Transactions on 20000701	☐
	15	Fanjul , J. International Preliminary Examination Report for application no. PCT/ES99/00296 EPO 20011219	☐
	16	NA. Fractus ´s Objections to claim construction memorandum and order. Case 6:09-cv-00203. Fractus 20110114	☐
	17	Puente , C. ; Romeu , J. ; Cardama , A. Fractal-shaped antennas Frontiers in electromagnetics - IEEE Press 20000101	☐
	18	Love , J. Court Order. Provisional claim construction and motion for summary judgement. Provisional markman order. Court 20101109	☐
	19	Jaggard , D. L. Rebuttal expert report of Dr. Dwight L. Jaggard (redacted version) Fractus 20110216	☐
	20	Long , S. A. Rebuttal expert report of Dr. Stuart A. Long (redacted version) Fractus 20110216	☐
	21	Stutzman , W. L. Rebuttal expert report of Dr. Warren L. Stutzman (redacted version) Fractus 20110216	☐
	22	Borowski , E. J. Dictionary of Mathematics Collins - Case 6:09-cv-00203-LED-JDL 19890101	☐

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	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	23	Mehaute, A. Fractal Geometrics CRC Press - Case 6:09-cv-00203-LED-JDL 19900101	☐
	24	NA. Defendants RIM, Samsung, HTC, LG and Pantech's response to plantiff Fractus SA's opening claim construction brief in "Case 6:09-cv-00203-LED-JDL Defendants 20100730	☐
	25	NA. Defendants RIM, Samsung, HTC, LG and Pantech's response to plantiff Fractus SA's opening claim construction brief in "Case 6:09-cv-00203-LED-JDL - Exhibit 41 - Demonstrative re: counting segments Defendants 20100730	☐
	26	NA. Defendants RIM, Samsung, HTC, LG and Pantech's response to plantiff Fractus SA's opening claim construction brief in "Case 6:09-cv-00203-LED-JDL - Exhibit 42 - Demonstrative showing how straight segments can be fitted over a curved surface Defendants 20100730	☐
	27	NA. Defendants RIM, Samsung, HTC, LG and Pantech's response to plantiff Fractus SA's opening claim construction brief in "Case 6:09-cv-00203-LED-JDL" - Exhibit 1 - Chart of Agreed Terms and Disputed Terms Defendants 20100730	☐
	28	NA. Defendants RIM, Samsung, HTC, LG and Pantech's response to plantiff Fractus SA's opening claim construction brief in "Case 6:09-cv-00203-LED-JDL" - Exhibit 2 - Family Tree of Asserted Patents Defendants 20100730	☐
	29	NA. Response of defendants Kyocera Communications, Inc; Palm Inc. and UTStarcom, Inc. to plantiff Fractus SA's opening claim construction brief in "Case 6:09-cv-00203-LED-JDL" Defendants 20100730	☐
	30	NA. Claims for the EP patent 00909089. Herrero y Asociados 20050128	☐
	31	NA. The American Heritage College Dictionary - pag 684 , 1060 Houghton Mifflin Comp. - 3d ed. - Case 6:09-cv-00203-LED-JDL 19970101	☐
	32	NA. The American Heritage Dictionary of the English Language Houghton Mifflin Company - 4th ed.- Case 6:09-cv-00203-LED-JDL 20000101	☐
	33	Walker , B. D. Response office action for the US patent application 11/179250 Howison & Arnott - Case 6:09-cv-00203-LED-JDL 20050712	☐

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	34	Walker , B. Preliminary amendment for the US patent application 11/780932 dated on July 20, 2007 Howison & Arnott - Case 6:09-cv-00203-LED-JDL 20070720	☐
	35	Theiler , J. Estimating fractal dimension J. Opt. Soc. Am. A. Case 6:09-cv-00203-LED-JDL 19900601	☐
	36	Moore , S. Response to Office Action dated February 7, 2006 of US patent application no. 11/033788 Jenkens & Gilchrist 20060601	☐
	37	Stutzman , W. L. ; Thiele , G. A. Antenna theory and design John Wiley and Sons. Pages 8-9 , 43-48 , 210-219 19980101	☐
	38	Rich , Barnett. Review of Elementary Mathematics 2d ed.1997 McGraw - Hill - Case 6:09-cv-00203-LED-JDL 19970101	☐
	39	Sclater , N. ; Markus , J. McGraw-Hill Electronics Dictionary McGraw - Hill 19970101	☐
	40	Johnson , R. Antenna engineering handbook (3rd. edition) - Pages 14-1 - 14-5 McGraw-Hill 19930101	☐
	41	Dictionary of Scientific & Technical Terms (6th Ed., 2002) pag 1489 McGraw-Hill 20020101	☐
	42	Parker , S. McGraw-Hill Dictionary of Scientific and Technical Terms (5th ed. 1994) McGraw-Hill - Case 6:09-cv-00203-LED-JDL 19940101	☐
	43	NA. The American Heritage Dictionary - pag 817 , 961 Morris - William - (Second College edition) - Case 6:09-cv-00203-LED-JDL 19820101	☐
	44	Henderson West , B. The Prentice-Hall encyclopedia of mathematics Prentice-Hall 19820101	☐

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	45	West , B.H. et al. The Prentice-Hall Encyclopedia of Mathematics (1982) Prentice-Hall - Case 6:09-cv-00203-LED-JDL 19820101	☐
	46	NA. IEEE Standard Definitions of Terms for Antennas, IEEE Std. 145-1993 (1993) The Institute of Electrical and Electronics Engineers - Case 6:09-cv-00203-LED-JDL 19930318	☐
	47	Borja , C. Antenas fractales microstrip Universitat Politècnica de Catalunya 19970701	☐
	48	Phan , T. Notice of allowance of US patent application No. 10/963080 dated September 1, 2005. USPTO 20050901	☐
	49	Phan , T. Notice of allowance of US patent application No. 11/102390 dated July 6, 2006. USPTO 20060706	☐
	50	Phan , T. Notice of allowance of US patent application No. 11/179257 dated October 19, 2006 USPTO 20061019	☐

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EXAMINER SIGNATURE

Examiner Signature	/Hoang Nguyen/	Date Considered	05/19/2011

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[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
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Attorney Docket Number	47005-P018WUSC1

FORM 6

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7528782		2009-05-05	Baliarda	

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	00/36700	WO		2000-06-22	Ying		☐

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NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

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	1	Phan , T. Office Action for US Patent Application No 11/550256 dated on January 15, 2008 USPTO 20080115	☐
	2	Wimer , M. Notice of allowance of US patent application no. 10/822933 dated on October 18, 2007 USPTO 20071018	☐
	3	Collier , C. P. Geometry for teachers Waveland Press, Inc. 19840101	☐
	4	Mandelbrot , B. B. Opinions (Benoit B. Mandelbrot) World Scientific Publishing Company - Case 6:09-cv-00203-LED-JDL 19930101	☐
	5	Werner , D. H. ; Werner , P. L. ; Ferrare , A. J. Frequency independent features of self-similar fractal antennas Antennas and Propagation Society International Symposium, 1996. AP-S. Digest 19960721	☐
	6	Foroutan-pour , K. ; Dutilleul , P. ; Smith , D.L. Advances in the implementation of the box-counting method of fractal dimension estimation Applied Mathematics and Computation ; Elsevier 19990501	☐
	7	Graf, R. Modern dictionary of electronics Butterworth-Heinemann (6th Ed.) 19840101	☐
	8	NA. Collins Dictionary - Pag608. Collins 19790101	☐
	9	NA. Int'l Electro-Technical Commission IEV No. 712-01-04 - Electropedia : the world's online electrotechnical vocabulary Electropedia - Commission Electrotechnique Internationale - http://www.electropedia.org 19980401	☐
	10	NA. Webster's New Collegiate Dictionary G & C Merriam Co. 19810101	☐
	11	NA. IEEE Standard dictionary of electrical and electronics terms IEEE Standard (6th ed.) 19960101	☐

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	12	Sawaya , K. ; Ishizone , T. ; Mushiake , Y. A simplified Expression of Dyadic Green's Function for a Conduction Half Sheet Vol. AP-29, No. 5 (Sept. 1981) IEEE TRANSACTIONS ON ANTENNAS & PROPAGATION 19810901	☐
	13	Pozar , D. ; Newman , E. Analysis of a Monopole Mounted near or at the Edge of a Half-Plane IEEE Transactions on Antennas and Propagation 19810501	☐
	14	Johnson, R. Antenna engineering handbook - Pages 4-26 - 4-33 Mc Graw Hill - (3rd Ed.) 19930101	☐
	15	NA. The American Heritage Dictionary - pag 311 , 1208 New College ed. (2nd ed.) 19820101	☐
	16	NA. The American Century Dictionary Oxford University Press 19950101	☐
	17	Rademacher , H. ; Toeplitz , O. The Enjoyment of Math Princeton Science Library 19570101	☐
	18	NA. The Random House Dictionary Random House 19840101	☐
	19	Pressley, A. Elementary Differential Geometry Springer 20000101	☐
	20	Peitgen & D. Saupe, H. The science of fractal images Springer-Verlag 19880101	☐
	21	Peitgen et al, H O. Chaos and fractals : new frontiers of science. Pags. 22-26, 62-66, 94-105, 212-219, 229-243 Springer-Verlag 19920101	☐
	22	Nguyen , H. Notice of Allowance of US patent application no. 10/182635 dated on April 4, 2005 USPTO 20050411	☐

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	23	Request for Inter partes reexamination of US patent no. 7411556 - 95/000600 dated on December 3, 2010 - Exhibits HTC 20101203	☐
	24	Request for Inter partes reexamination of US patent no. 7411556 - 95/000590 dated on December 16, 2010 - Exhibits Kyocera 20101216	☐
	25	Request for inter partes reexamination of US patent no. 7411556 - 95/001462 dated on October 1, 2010 - Exhibits Samsung 20101001	☐
	26	Vinoy , K. J. et al. Hilbert curve fractal antenna: a small resonant antenna for VHF/UHF applications. Microwave and Optical Technology Letters. Pag 215-219 20010501	☐
	27	NA. Amendments and Review of CN patent application no. 01823716.9 of OA dated February 16, 2007. Patent and Trademanrk Office, China Council for the Promotion of International Trade Patent and Trademanrk Office, China Council for the Promotion of International Trade 20070821	☐
	28	Feng , Liu. Office Action of CN patent application 018237169 dated February 16, 2007 The State Intelletual Property Office of the People's Republic of China 20070216	☐
	29	NA. Response to Second OA of CN patent application no. 01823716.9 dated September 21, 2007 CCPIT Patent and Trademark Law Office 20071203	☐
	30	Feng , Liu. Second Office Action of CN patent application 018237169 dated September 21, 2007 The State Intellectual Property Office of the People's Republic of China 20070921	☐
	31	NA. FCC - United States table of frequency allocations. 377-538 Federal Communications Commission 19991001	☐
	32	NA. United States Table of Frequency allocations - The Radio Spectrum United States Department of Commerce 19960301	☐
	33	Buczkowski , Stéphane ; Kyriacos , Soula ; Nekka , Fahima ; Cartilier , Louis. The modified box-countig method: analysis of some characteristic paramenters. 411-418(8) Pattern Recognition 19980420	☐

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	34	Kyriacos , S. ; Buczkowski , S. et al. A modified box-counting method. 321-324 Fractals - World Scientific Publishing Company 19940101	☐
	35	Mehaute, A. Fractal Geometrics. 3-35 CRC Press - Case 6:09-cv-00203-LED-JDL 19900101	☐
	36	Barnsley , M. Fractals Eveywhere Academic Press Professional 19930101	☐
	37	Shafer , G. Probability and Finance John Wiley & Sons 20010101	☐
	38	Parron , J. ; Rius , J. ; Romeu , J. Study of the Koch fractal monopole in the frequency domain Fractalcoms 20020530	☐

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Doc code: IDS
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	Attorney Docket Number	47005-P018WUSC1

FORM 7

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7675470	B2	2010-03-09	SANZ ET AL.	
	2	7423592	B2	2008-09-09	PROS ET AL.	
	3	6087990		2000-07-11	THILL ET AL.	
	4	6011518		2000-01-04	YAMAGISHI ET AL.	

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	1	20040009755	A1	2004-01-15	YOSHIDA	

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	1	Bach Andersen , J. et al., On closely coupled dipoles in a random field, Antennas and Wireless Propagation Letters, IEEE, 2006-12-01	☐
	2	Balanis , Constantine A., Antenna Theory - Analysis and design - Chapter 10, Hamilton Printing, 1982-01-01	☐
	3	Bhavsar , Samir A., Fractus S.A. v. Samsung Electronics Co., Ltd. et al., 6:09-cv-00203 and Fractus S.A. v. LG Electronics Mobilecomm U.S.A., Inc. et al., 6-09-cv-00205 disclosure of material information to the USPTO, Baker Botts LLP, 2009-10-28	☐
	4	Rudge , A. W. et al., The handbook of antenna design, IEE Eletromagnetic Waves Series; Peter Peregrinus Ltd.; 2nd ed., 1986-01-01	☐
	5	Sauer , Joseph M., Response to the Office Action dated October 4, 2004 for the US Patent Application No. 10/422578, Jones Day, 2005-01-06	☐
	6	Sauer , Joseph M., Response to the Office Action dated April 7, 2005 for the US Patent Application 10/422578, Jones Day, 2005-05-31	☐
	7	Sauer , Joseph M., Request for Continued Examination for US Patent Application No. 10/422578 with response to the office action dated on April 7, 2005 and the advisory action dated on June 23, 2005, Jones Day, 2005-08-08	☐
	8	Wimer , Michael C., Office Action for US Patent Application No. 10/422578 dated on October 4, 2004, USPTO, 2004-10-04	☐

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OPAP IAP1 MAR 30 2011 PATENT & TRADEMARK OFFICE

	9	Wimer , Michael, Office Action for US Patent Application No 10/422578 dated on April 7, 2005, USPTO, 2005-04-07	☐
	10	Wimer , M. C., Office Action for the US patent application 10/422578 dated on August 24, 2005, USPTO, 2005-08-24	☐
	11	Wimer , Michael C., Advisory Action before the filing of an Appeal Brief for US Patent Application No. 10/422578, USPTO, 2005-06-23	☐
	12	NA, Defendant HTC Corporation's First amended answer and counterclaim to plaintiff's amended complaint, Defendants, 2009-10-02	☐
	13	NA, European Search Report of patent application no. 10180818 dated December 13, 2010, European Patent Office, 2010-12-13	☐

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	12228487	PROS ET AL.
	Examiner	**Art Unit**
	HOANG V NGUYEN	2821

ORIGINAL		INTERNATIONAL CLASSIFICATION										
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED					
343	700MS	H	0	1	Q	1 / 38 (2006.0)						
CROSS REFERENCE(S)		H	0	1	Q	1 / 36 (2006.0)						
		H	0	1	Q	1 / 24 (2006.0)						

CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				
343	895	702			

☐ Claims renumbered in the same order as presented by applicant ☒ CPA ☐ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1	2	17	18	33	34	49								
	2	3	18	19	34	35	50								
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NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	45	
/HOANG V NGUYEN/ Primary Examiner.Art Unit 2821	05/19/2011	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	10

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	665999	antenna	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/05/19 10:55
L2	721617	pcb or (circuit adj board)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/05/19 10:56
L3	2171223	ground$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/05/19 10:56
L4	2802600	feed$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/05/19 10:56
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L6	497	space adj filling adj curve	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/05/19 10:56

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✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☒ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	08/23/2010	01/10/2011	05/19/2011						
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31	46		=	=						
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33	48		=	=						
34	49		=	=						
35	50		=	=						
36	51		=	=						
37	52		=	=						
38	53		=	=						
39	54		=	=						
40	55		=	=						
44	56		=	=						
41	57		=	=						
42	58		=	=						
43	59		=	=						
45	60		=	=						

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12228487	PROS ET AL.
	Examiner	Art Unit
	HOANG V NGUYEN	2821

SEARCHED			
Class	Subclass	Date	Examiner
343	700MS, 702, 895, 833, 834	5/19/11	HN

SEARCH NOTES		
Search Notes	Date	Examiner
see EAST search history	5/19/11	HN

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner
343	700MS, 895, 702	5/19/11	HN

OPAP IAP4 JUN 08 2011 PATENT & TRADEMARK OFFICE

06-09-11

RCE/Ifw

PTO/SB/30 (07-09)
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Request for Continued Examination (RCE) Transmittal

Address to:
Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Application Number	12/228,487-Conf. #6222
Filing Date	August 13, 2008
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	H. V. Nguyen
Attorney Docket Number	47005-P018WUSC1

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.

Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. See Instruction Sheet for RCEs (not to be submitted to the USPTO) on page 2.

1. Submission required under 37 CFR 1.114 Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

   a. [ ] Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

      i. [ ] Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____

      ii. [ ] Other _____

   b. [x] Enclosed

      i. [ ] Amendment/Reply

      ii. [ ] Affidavit(s)/Declaration(s)

      iii. [x] Information Disclosure Statement (IDS)

      iv. [ ] Other _____

2. Miscellaneous

   a. [ ] Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

   b. [ ] Other _____

3. Fees The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.

   a. [x] The Director is hereby authorized to charge the following fees, any underpayment of fees, or credit any Overpayments, to Deposit Account No. 23-2426 .

      i. [x] RCE fee required under 37 CFR 1.17(e)

      ii. [ ] Extension of time fee (37 CFR 1.136 and 1.17)

      iii. [ ] Other _____

   b. [ ] Check in the amount of $ _____ enclosed

   c. [ ] Payment by credit card (Form PTO-2038 enclosed)

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Signature		Date	June 8, 2011
Name (Print/Type)	Shoaib A. Mithani	Registration No.	61,654

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EM018959671 US, on the date shown below in an envelope addressed to:
MS RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: June 8, 2011 Signature: _____ (Brenda I. Brown)

5689405v.1 47005/P018WUSC1

06/09/2011 MBELETE1 00000007 232426 12228487
01 FC:1801 810.00 DA

OPAP IAP4
JUN 08 2011
PATENT & TRADEMARK OFFICE

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EM018959671 US, on the date shown below in an envelope addressed to: MS RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: June 8, 2011 Signature: (Brenda I. Brown)

Docket No.: 47005-P018WUSC1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jaume Anguera Pros et al.

Application No.: 12/228,487 Confirmation No.: 6222

Filed: August 13, 2008 Art Unit: 2821

For: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES Examiner: H. V. Nguyen

INFORMATION DISCLOSURE STATEMENT (IDS)

MS RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement, pursuant to 37 CFR 1.114(c), accompanies the Request for Continued Examination (37 CFR 1.114) submitted herewith.

Applicant has not submitted copies of each cited U.S. patent and U.S. patent application in accordance with 37 CFR 1.98(a)(2). Applicant submits herewith copies of any cited non-patent documents and foreign patent documents in accordance with 37 CFR 1.98(a)(2).

In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing of this Information Disclosure Statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 23-2426, under Order No. 47005-P018WUSC1.

Dated: June 8, 2011

Respectfully submitted,

By _____
Shoaib A. Mithani
Registration No.: 61,654
WINSTEAD PC
P.O. Box 50784
Dallas, Texas 75201
(214) 745-5400
Attorneys For Applicant

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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OPAP IAP4 JUN 08 2011 PATENT & TRADEMARK OFFICE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	12228487
Filing Date	2008-08-13
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	Nguyen, Hoang V
Attorney Docket Number	47005-P018WUSC1

FORM 1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5933330		1999-08-03	Beutler et al	
	2	6285327		2001-09-04	See	
	3	6483462		2002-11-19	Weinberger	
	4	6762723		2004-07-13	Nallo et al	
	5	6781548		2004-08-24	Wen et al	

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					

If you wish to add additional U.S. Published Application citation information please click the Add button.

FOREIGN PATENT DOCUMENTS

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

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Examiner Name	Nguyen, Hoang V
Attorney Docket Number	47005-P018WUSC1

OPAP IAP4 JUN 08 2011 PATENT & TRADEMARK OFFICE

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐

If you wish to add additional Foreign Patent Document citation information please click the Add button

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	Paschen , D. A. ; Olson , S. A crossed-slot antenna with an infinite balun feed. Antenna Applications Symposium, 1995. 19950920	☐
	2	McCormick , J. A Low-profile electrically small VHF antenna. 15th Annual Symposium on the USAF antenna reserach and development program 19651012	☐
	3	Watson , T. ; Friesser , J. A phase shift direction finding technique. Annual Symposium on the USAF antenna research and development program 19571021	☐
	4	Zhang , S. Huff , G. ; Bernhard , T. Antenna efficiency and gain of two new compact microstrip antennas. Antenna Applications symposium, 2001 20010919	☐
	5	Meier , K. ; Burkhard , M. ; Schmid , T. et al Broadband calibration of E-field probes in Lossy Media. IEEE Transactions on Microwave Theory and Techniques 19961001	☐
	6	NA Defendants' Motion to Clarify Claim Construction - Document 854. Defendants 20110418	☐
	7	Jones, Michael E. Defendants' opposition to Fractus SA objections to the Court's March 9, 2011 Order - Document 780. Baker Botts, LLP 20110331	☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487
	Filing Date	2008-08-13
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	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	8	Nokia Mobile Phones Exhibit 9: Internal Photographs FCC ID: LJPNPW-1NB. Federal Communication Commission - FCC, 20010215	☐
	9	Naik , A. ; Bathnagar , P. S. Experimental study on stacked ring coupled triangular microstrip antenna Antenna Applications Symposium, 1994	☐
	10	Stutzman , W. L. Expert report of Dr. Warren L. Stutzman (redacted) - expert witness retained by Fractus. Fractus, 20110223	☐
	11	Jaggard , D. L. Expert report of Dwight L. Jaggard (redacted) - expert witness retained by Fractus. Fractus, 20110223	☐
	12	Long , S. Expert report of Stuart Long (redacted) - expert witness retained by Fractus. Fractus, 20110223	☐
	13	Lyon , J. ; Rassweiler , G. ; Chen , C. Ferrite-loading effects on helical and spiral antennas. 15th Annual Symposium on the USAF antenna reserach and development program, 19651012	☐
	14	Graff , B. Form 731 Corrections: GMLNSW-4DX M. Flom Associates - MFA, 20000424	☐
	15	Jaggard , D. L. Fractal electrodynamics and modeling. Directions in electromagnetic wave modeling 19910101	☐
	16	NA Fractus SA's opening claim construction brief - Exhibit 2 - Parties' Agreed Constructions. Fractus 20100716	☐
	17	NA Fractus SA's opening claim construction brief - Letter Fractus - Case 6:09-cv-00203-LED-JDL 20100716	☐
	18	NA Fractus SA's Opening Claim Construction Brief with Parties' Proposed and Agreed Constructions in the case of Fractus SA v. Samsung Electornics Co. Ltd. et al. Fractus - Case 6:09-cv-00203-LED-JDL 20100716	☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	19	NA Fractus SA's opening claim construction brief, - Exhibit 1 - Parties' Proposed Constructions - Case 6:09-cv-00203-LED-JDL Fractus, 20100716	☐
	20	Howe , Micah J. Fractus, S.A.'s objections to the Court's March 9, 2011, Order - Document 768. Susman Godfrey LLP 20110325	☐
	21	Howe , M. Fractus's Response to Defendants' Motion to Clarify Claim Construction - Document 887. Susman and Godfrey 20110425	☐
	22	NA Fractus's sur-reply to defendants' motion for reconsideration of the court's december 17, 2010 claim construction order based on newly-available evidence - Document 666. Fractus 20110308	☐
	23	Behncke , M. Fractus's surreply to defendants' Motion for Summary Judgment re publication dates of three references - Document 876. Susman Godfrey LLP 20110420	☐
	24	Cristal , E. G. et al Hairpin-line and hybrid hairpin-line / Half-wave parallel-coupled-line filers. Microwave Theory and Techniques, IEEE Transactions on 19721101	☐
	25	NA Infringement Chart - Kyocera MARBL. Fractus 20091105	☐
	26	NA Infringement Chart - Kyocera NEO E1100. Fractus 20091105	☐
	27	NA Infringement Chart - Kyocera S2400. Fractus 20091105	☐
	28	NA Infringement Chart - LG Aloha LX140. Fractus 20091105	☐
	29	NA Infringement Chart - LG AX155. Fractus 20091105	☐

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	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	30	NA Infringement Chart - LG AX380. Fractus 20091105	☐
	31	NA Infringement Chart - LG AX8600. Fractus 20091105	☐
	32	NA Infringement Chart - LG Chocolate VX8550. Fractus 20091105	☐
	33	NA Infringement Chart - LG enV Touch VX1100. Fractus 20091105	☐
	34	NA Infringement Chart - LG EnV3 VX9200. Fractus 20091105	☐
	35	NA Infringement Chart - LG Flare LX165. Fractus 20091105	☐
	36	NA Infringement Chart - LG Lotus. Fractus 20091105	☐
	37	NA Infringement Chart - LG MUZIQ LX570. Fractus 20091105	☐
	38	NA Infringement Chart - LG Rumor. Fractus 20091105	☐
	39	NA Infringement Chart - LG Shine CU720. Fractus 20091105	☐
	40	NA Infringement Chart - LG Voyager VX10000. Fractus 20091105	☐

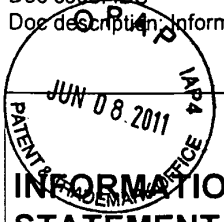
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	41	NA Infringement Chart - LG VU CU920. Fractus 20091105	☐
	42	NA Infringement Chart - LG VX5400. Fractus 20091105	☐
	43	NA Infringement Chart - LG VX5500. Fractus 20091105	☐
	44	NA Infringement Chart - LG VX8350. Fractus 20091105	☐
	45	NA Infringement Chart - LG VX8360. Fractus 20091105	☐
	46	NA Infringement Chart - LG VX8560 Chocolate 3. Fractus 20091105	☐
	47	NA Infringement Chart - LG VX9400. Fractus 20091105	☐
	48	NA Infringement Chart - Pantech Breeze C520. Fractus 20091105	☐
	49	NA Infringement Chart - Pantech DUO C810. Fractus 20091105	☐
	50	NA Infringement Chart - RIM Blackberry 8110. Fractus 20091105	☐

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)
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Examiner Name	Nguyen, Hoang V
Attorney Docket Number	47005-P018WUSC1

FORM 2

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐

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NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487
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	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

OPAP IAP4 JUN 08 2011 PATENT & TRADEMARK OFFICE

	1	NA. Infringement Chart - RIM Blackberry 8120. Fractus 20091105	☐
	2	NA. Infringement Chart - RIM Blackberry 8130. Fractus 20091105	☐
	3	NA. Infringement Chart - RIM Blackberry 8220. Fractus 20091105	☐
	4	NA. Infringement Chart - RIM Blackberry 8310. Fractus 20091105	☐
	5	NA. Infringement Chart - RIM Blackberry 8320. Fractus 20091105	☐
	6	NA. Infringement Chart - RIM Blackberry 8330. Fractus 20091105	☐
	7	NA. Infringement Chart - RIM Blackberry 8820. Fractus 20091105	☐
	8	NA. Infringement Chart - RIM Blackberry 8830. Fractus 20091105	☐
	9	NA. Infringement Chart - RIM Blackberry Pearl 8100. Fractus 20091105	☐
	10	NA. Infringement Chart - Samsung FlipShot SCH-U900. Fractus 20091105	☐
	11	NA. Infringement Chart - Samsung M320. Fractus 20091105	☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	12	NA. Infringement Chart - Samsung SCH A127. Fractus 20091105	☐
	13	NA. Infringement Chart - Samsung SCH U340. Fractus 20091105	☐
	14	NA .Infringement Chart - Samsung SCH U410. Fractus 20091105	☐
	15	NA. Infringement Chart - Samsung SCH U700. Fractus 20091105	☐
	16	NA. Infringement Chart - Samsung SCH-A645. Fractus 20091105	☐
	17	NA. Infringement Chart - Samsung SCH-R430. Fractus 20091105	☐
	18	NA. Infringement Chart - Samsung SCH-R500. Fractus 20091105	☐
	19	NA. Infringement Chart - Samsung SCH-R600. Fractus 20091105	☐
	20	NA. Infringement Chart - Samsung SCH-U310. Fractus 20091105	☐
	21	NA. Infringement Chart - Samsung SCH-U520. Fractus 20091105	☐
	22	NA. Infringement Chart - Samsung SCH-U750. Fractus 20091105	☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	23	NA. Infringement Chart - Samsung SCH-U940. Fractus 20091105	☐
	24	NA. Infringement Chart - Samsung SGH A117. Fractus 20091105	☐
	25	NA. Infringement Chart - Samsung SGH A437. Fractus 20091105	☐
	26	NA. Infringement Chart - Samsung SGH A867. Fractus 20091105	☐
	27	NA. Infringement Chart - Samsung SGH T229. Fractus 20091105	☐
	28	NA. Infringement Chart - Samsung SGH T439. Fractus 20091105	☐
	29	NA. Infringement Chart - Samsung SGH T919. Fractus 20091105	☐
	30	NA. Infringement Chart - Samsung SGH-A237. Fractus 20091105	☐
	31	NA. Infringement Chart - Samsung SGH-A257. Fractus 20091105	☐
	32	NA. Infringement Chart - Samsung SGH-A837. Fractus 20091105	☐
	33	NA. Infringement Chart - Samsung SGH-T219. Fractus 20091105	☐

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	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	34	NA. Infringement Chart - Samsung SGH-T559. Fractus 20091105	☐
	35	NA .Infringement Chart - Samsung SGH-T639. Fractus 20091105	☐
	36	NA. Infringement Chart - Samsung SGH-T929. Fractus 20091105	☐
	37	NA. Infringement Chart - Samsung SPH-M550. Fractus 20091105	☐
	38	NA. Infringement Chart - Sanyo Katana II. Fractus 20091105	☐
	39	NA. Infringement Chart - Sanyo Katana LX. Fractus 20091105	☐
	40	NA. Infringement Chart - UTStarcom CDM7126. Fractus 20091105	☐
	41	Borja , C. ; Puente , C. Iterative network models to predict the performance of Sierpinski fractal antennas and networks. Antennas and Propagation Society International Symposium, 1999. IEEE 19990711	☐
	42	NA. Joint Motion to Dismiss Claims and Counterclaims re '850 and '822 - Document 843. Defendants 20110415	☐
	43	Ewing , A Letter and Engineering Test Report of FCC ID: GMLNPW-3 Test and Certification Center - TCC 20011219	☐
	44	NA. Letter from Baker Botts to Howison & Arnott LLP including exhibits. Baker Botts 20100805	☐

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	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
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	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	45	NA. Letter from Baker Botts to Kenyon & Kenyon LLP, Winstead PC and Howison & Arnott LLP including exhibits. Baker Botts, 20091028	☐
	46	Posio , E. Letter to FCC - About GMLNPW-3 complies with ANSI/IEEE C95.1-1992 Standard for Safety Levels. Nokia Mobile Phones, 20011207	☐
	47	Salow , S. Letter to FCC - About LJPNPW-1 NB complies with ANSI/IEEE C95.1-1992 Standard for Safety Levels. Nokia Mobile Phones, 20010226	☐
	48	Flom , M. Letter to FCC - Application form 731 and Engineering Test Report by Nokia Mobile Phones for FCC ID: LJPNPW-1NB M. Flom Associates - MFA, 20010312	☐
	49	NA Letter to FCC - Application form 731 and Engineering Test Report by Nokia Mobile Phones for FCC ID: LJPNSW-6NX M. Flom Associates, 19990401	☐
	50	Flom , M. Letter to FCC - Communication of replacing employee M. Flom Associates, 20000523	☐

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)
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JUN 08 2011
PATENT AND TRADEMARK OFFICE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	12228487
Filing Date	2008-08-13
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	Nguyen, Hoang V
Attorney Docket Number	47005-P018WUSC1

FORM 3

U.S.PATENTS

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OPAP IAP4 JUN 08 2011 PATENT & TRADEMARK OFFICE

	1	Posio , E. Letter to FCC - Compliance Statement of GMLNPW-3 Nokia Mobile Phones 20011207	☐
	2	Posio , E. Letter to FCC - Electronic Serial Number for FCC ID: GMLNPW-3 Nokia Mobile Phones 20011207	☐
	3	Posio , E. Letter to FCC - Electronic Serial Number for FCC ID: GMLNSW-4DX Nokia Mobile Phones 20000207	☐
	4	Salow , S. Letter to FCC - FCC ID LJPNPW-1NB complies with OET Bulletin No 53 as referenced in Section 22.915 of the Commissions rules and with EIA/TIA/IS-54-B Nokia Mobile Phones 20010226	☐
	5	Myrskog , M Letter to FCC - Letter that will authorize the appointment of MORTON FLOM Eng and/or FLOMASSOCIATES INC to act as their Agent in all FCC matters Nokia Mobile Phones 20000914	☐
	6	Flom , M. Letter to FCC - Nokia SAR Information M. Flom Associates - MFA 20000519	☐
	7	Posio , E. Letter to FCC - Request for confidentiality of the information accompanying the application of FCC ID: GMLNPW-3 Nokia Mobile Phones 20011207	☐
	8	Posio , E. Letter to FCC - Request for confidentiality on the information accompanying the application of FCC ID: GMLNSW-4DX Nokia Mobile Phones 20000207	☐
	9	Graff , W. Letter to FCC - Test Report GMLNSW-4DX M. Flom Associates - MFA 20000317	☐
	10	Posio , E. Letter to FCC about GMLNSW-4DX complies with ANSI/IEEE C95.1-1992 Standard for Safety Levels Nokia Mobile Phones 20000307	☐
	11	Wikka , K. Letter to FCC that will authorize the appointment of MORTON FLOM Eng and/or FLOMASSOCIATES INC to act as their Agent in all FCC matters Nokia Mobile Phones 19990805	☐

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	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	12	Tribble, M. L. Letter to John D. Love - Document 715 - Permission to file a summary judgment motion of no indefiniteness on the issues wher the Court's Report and Recommendation already has held that the claim term is not indefinite Susman Godfrey 20110318	☐
	13	Tribble , M. L. Letter to John D. Love - Document 716 - Permission to file a partial summary judgement motion on infringement. Susman Godfrey , LLP 20110318	☐
	14	Sirola, Neil P. Letter to John D. Love - Document 721 - Permission to file a motion for summary judgment of invalidity of the following 7 asserted claims from the MLV, patent family... Baker Botts, LLP 20110318	☐
	15	Flom , M. Letter to modify the Emission Designator M. Flom Associates - MFA 20010330	☐
	16	Love , J. Minute Entry re Hearing on 4-21-11 - Document 890 United States Distric Court for the Eastern Distric of Texas - Tyler Division 20110427	☐
	17	Nokia Nokia MBD-11 Mobile Holder - SAR Specification Nokia 20020301	☐
	18	NA Nokia. Antenna Photos - FCC ID: GMLNPW-3 Federal Communications Commission - FCC 20020219	☐
	19	Ho , T. Notice of Allowance of US patent application no. 12/652974 dated on February 17, 2011 USPTO 20110217	☐
	20	NA OET Exhibits List for FCC ID: GMLNSW-4DX Office of Engineering and Technology - FCC 20000908	☐
	21	NA OET Exhibits list for FCC ID: LJPNPW-1NB Federal Communications Commission - FCC 20010503	☐
	22	NA OET Exhibits list for FCC ID: LJPNSW-6NX Federal Communications Commission - FCC 19990708	☐

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	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	23	Menefee , James Office Action for the US patent 95/001389 dated on August 12, 2010 USPTO 20100812	☐
	24	Lee , B. T. Office action for the US patent application 10/181790 dated on August 27, 2004 USPTO 20040827	☐
	25	Lee , B. T. Office action for the US patent application 10/181790 dated on June 2, 2005 USPTO 20050602	☐
	26	Ho , T. Office Action of US patent application no. 12/652974 dated June 23, 2010 USPTO 20100623	☐
	27	Menefee , J. Office Action of US patent application no. 95/000590 and 95/001462 dated on May 6, 2011 USPTO 20110506	☐
	28	NA Order - Document 670 Court 20110309	☐
	29	Davis, Leonard Order - Document 783 United States District Judge 20110401	☐
	30	Love , J. D. Order - Document 868 United States Magristrate Judge 20110419	☐
	31	NA Plaintiff Fractus SA's answer to amended counterclaims of defendant Pantech Wireless Inc to Fractus's second amended complaint - Document 696 Fractus 20110315	☐
	32	NA Plaintiff Fractus SA's answer to second amended counterclaims of defendant HTC Corporation to Fractus's second amended complaint - Document 678 Fractus 20110314	☐
	33	NA Plaintiff Fractus SA's answer to second amended counterclaims of defendant HTC to Fractus's second amended complaint - Document 680 Fractus 20110314	☐

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	Attorney Docket Number	47005-P018WUSC1

	34	NA Plaintiff Fractus SA's answer to second amended counterclaims of defendant LG Electronics to Fractus's second amended complaint - Document 694 Fractus 20110315	☐
	35	NA Plaintiff Fractus SA's answer to second amended counterclaims of defendant Samsung to Fractus's second amended complaint - Document 695 Fractus 20110315	☐
	36	Salow , S. Request for confidentiality of the information accompanyinh the application of FCC ID: LJPNPW-1NB M. Flom Associates - MFA 20010226	☐
	37	Lee , B. T. Response to office action for the US patent application 10/181790 dated on August 27, 2004 USPTO 20041208	☐
	38	Shoaib , M. Response to the Office Action dated on June 23, 2010 of US patent application no. 12/652974 Winstead 20101220	☐
	39	Sterne , R. G. Response to the Office Action for the US patent 95/001390 dated on August 19, 2010 Sterne, Kessler, Goldstein & Fox PLLC 20101119	☐
	40	NA SAR- Evaluation - DASY3 Dipole ValidationKit - Type: D1900V2 - Serial: 511 Schimd and Partner Engineering AG 20010213	☐
	41	NA SAR- Evaluation - DASY3 Dipole ValidationKit - Type: D835V2 - Serial: 405 Schmid and Partner Engineering AG 20010213	☐
	42	NA Second amended complaint for patent infringement - Case 6:09-cv-00203 - Document 222 Fractus 20091202	☐
	43	Hohlfeld , R. G. ; Cohen N. Self-similarity and the geometric requirements for frequency independence in antennae Fractals 19990117	☐
	44	NA Stipulation of Dismissal of all Claims and Counterclaims re '850 and '822 - Document 841 Defendants 20110415	☐

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	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	45	Campos, O. Study of multiband and miniature fractal antennas Universitat Politècnica de Catalunya 19980101	☐
	46	IEEE Standards Uncertainty System Check (Dipole Validation) - IEEE P1528 Schmid and Partner Engineering AG 20030101	☐
	47	NA Webster's New Collegiate Dictionary G & C Merriam Co. 19810101	☐
	48	NA Declaration of Jeffery D. Baxter - Including Exhibits: J, K, L, M ,N ,O, P, Q, R, S, T, U, Z, AA, KK, LL, WW, BBB, EEE, GGG, HHH, III, KKK, MMM, NNN, OOO, PPP, QQQ, TTT, UUU, VVV, WWW, YYY, ZZZ, AAAA, BBBB Defendants 20100730	☐

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I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EM018959827US, on the date shown below in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: September 12, 2011 Signature: (Brenda I. Brown)

OPAP SEP 1 2 2011 PATENT & TRADEMARK OFFICE

Docket No.: 47005-P018WUSC1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jaume Anguera Pros et al.

Application No.: 12/228,487 Confirmation No.: 6222

Filed: August 13, 2008 Art Unit: 2821

For: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES Examiner: H. V. Nguyen

INFORMATION DISCLOSURE STATEMENT (IDS)

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed before the mailing date of a first Office Action after the filing of a Request for Continued Examination under 37 CFR 1.114, as far as is known to the undersigned (37 CFR 1.97(b)(4)).

Applicant has not submitted copies of each cited U.S. patent and U.S. patent application in accordance with 37 CFR 1.98(a)(2). Applicant submits herewith copies of any cited non-patent documents and foreign patent documents in accordance with 37 CFR 1.98(a)(2).

In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing of this Information Disclosure Statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 23-2426, under Order No. 47005-P018WUSC1.

Dated: September 12, 2011

Respectfully submitted,

By_____
Shoaib A. Mithani
Registration No.: 61,654
WINSTEAD PC
P.O. Box 50784
Dallas, Texas 75201
(214) 745-5400
Attorneys For Applicant

OPAP IAP11 SEP 12 2011 PATENT & TRADEMARK OFFICE

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

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U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7446708		2008-11-04	Nguyen et al	

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U.S.PATENT APPLICATION PUBLICATIONS

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	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang
	Attorney Docket Number	47005-P018WUSC1

	1	Document 415 - P.R. 4-3 joint claim construction statement, dated on June 14, 2010	☐
	2	Document 429 - Declaration of Jeffery D. Baxter - Including Exhibits: J, K, L, M ,N ,O, P, Q, R, S, T, U, Z, AA, KK, LL, dated on July 30, 2010	☐
	3	Document 452 - Defendant's reply in support of their motion for summary judgment of invalidity based on indefiniteness and lack of written description for certain terms with exhibits WW, BBB, EEE, GGG, HHH, III, KKK, MMM, NNN, OOO, PPP, Q, dated on August 30, 2010	☐
	4	Document 641 - Defendant HTC America, Inc's second amended answer and counterclaim to plaintiff's second amended complaint, dated on February 25, 2011	☐
	5	Document 642 - Defendant HTC Corporation's second amended answer and counterclaim to plaintiff's second amended complaint, dated on February 25, 2011	☐
	6	Document 889 - Reply in support of defendants' motion to clarify claim construction, dated on April 27, 2011	☐
	7	Document 893 - Fractus SA's surreply to defendant's motion to clarify claim construction, April 29, 2011	☐
	8	Document 900 - Order, dated on April 29, 2011	☐
	9	Document 901 - Report and recommendation of United States Magistrate Judge, dated on May 02, 2011	☐
	10	Document 902 - Fractus SA's objections to defendants' prior art notice, dated on May 02, 2011	☐
	11	Document 915 - Defendants' response to plaintiff's objections to defendants notice of prior art, dated on May 05, 2011	☐

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	Attorney Docket Number	47005-P018WUSC1

	12	Document 933 - Defendants' motion for reconsideration of, and objections to, the May 2, 2011 report and recommendation clarifying claim construction, dated on May 09, 2011	☐
	13	Document 939 - Fractus's response to defendants' motion for reconsideration of and objections to the May 2, 2011, report and recommendations clarifying claim construction, dated on May 10, 2011	☐
	14	Document 968 - Order, dated on May 13, 2011	☐
	15	Document 971 - Order, dated on May 13, 2011	☐
	16	Internal Photos - FCC ID: GMLNPW-3 , Federal Communications Commission , December 19, 2001	☐
	17	Andersen , J. B. The handbook of antenna design - Low- and medium-gain microwave antennas. Rudge , A. W. et al - IEE Eletromagnetic Waves Series; Peter Peregrinus Ltd. (2nd ed.). Volumes 1 and 2. Pag 526-543. 1986.	☐

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	Examiner Name	Nguyen, Hoang
	Attorney Docket Number	47005-P018WUSC1

	1	Inter partes reexamination of US patent 7411556 - 95/001462 , 95/001590 - Third party requester's comments to patent owner's reply of August 08, 2011, dated on September 07, 2011	☐
	2	Decision sua sponte to merge reexamination proceedings of US patent 7411556 - 95/000590 - 95/001462 - dated on May 05, 2011	☐
	3	Response to the Office Action dated May 6, 2011 of US patent US7411556 - 95/001462 - 95/000590 - , dated on August 06, 2011	☐
	4	Notice of allowance of US patent application no. 12/652974 dated on August 10, 2011	☐

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Electronic Acknowledgement Receipt

EFS ID:	11114695
Application Number:	12228487
International Application Number:	
Confirmation Number:	6222
Title of Invention:	MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES
First Named Inventor/Applicant Name:	Jaume Anguera Pros
Customer Number:	61060
Filer:	Ross Robinson/Brenda Brown
Filer Authorized By:	Ross Robinson
Attorney Docket Number:	47005-P018WUSC1
Receipt Date:	05-OCT-2011
Filing Date:	13-AUG-2008
Time Stamp:	12:50:16
Application Type:	Utility under 35 USC 111(a)

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If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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<u>New International Application Filed with the USPTO as a Receiving Office</u>
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted via the Office electronic filing system in accordance with § 1.6(a)(4).

Dated: October 5, 2011
Electronic Signature for Brenda I. Brown: /Brenda I. Brown/

Docket No.: 47005-P018WUSC1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jaume Anguera Pros et al.

Application No.: 12/228,487 — Confirmation No.: 6222

Filed: August 13, 2008 — Art Unit: 2821

For: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES — Examiner: H. V. Nguyen

INFORMATION DISCLOSURE STATEMENT (IDS)

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08 (facsimile). It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed before the mailing date of a first Office Action after the filing of a Request for Continued Examination under 37 CFR 1.114, as far as is known to the undersigned (37 CFR 1.97(b)(4)).

Applicant has not submitted copies of each cited U.S. patent and U.S. patent application in accordance with 37 CFR 1.98(a)(2). Applicant submits herewith copies of any cited non-patent documents and foreign patent documents in accordance with 37 CFR 1.98(a)(2).

In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing of this Information Disclosure Statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 23-2426, under Order No. 47005-P018WUSC1.

Dated: October 5, 2011

Respectfully submitted,

Electronic signature: /Ross T. Robinson/
Ross T. Robinson
Registration No.: 47,031
WINSTEAD PC
P.O. Box 50784
Dallas, Texas 75201
(214) 745-5400
Attorneys For Applicant

12-19-11

1fn

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EM018960445 US, on the date shown below in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: December 15, 2011 Signature: (Brenda I. Brown)

Docket No.: 47005-P018WUSC1
(PATENT)

OPAP JAP11 DEC 15 2011 PATENT & TRADEMARK OFFICE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jaume Anguera Pros et al.

Application No.: 12/228,487 Confirmation No.: 6222

Filed: August 13, 2008 Art Unit: 2821

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P.O. Box 1450
Alexandria, VA 22313-1450

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In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing of this Information Disclosure Statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

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Dated: December 15, 2011

Respectfully submitted,

By _____
Shoaib A. Mithani
Registration No.: 61,654
WINSTEAD PC
P.O. Box 50784
Dallas, Texas 75201
(214) 745-5400
Attorneys For Applicant

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

OPAP IAP17 DEC 15 2011 PATENT & TRADEMARK OFFICE

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	12228487
Filing Date	2008-08-13
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	Nguyen, Hoang V
Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					

If you wish to add additional U.S. Published Application citation information please click the Add button.

FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2]	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐

If you wish to add additional Foreign Patent Document citation information please click the Add button

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	1	Oral and videotaped deposition of Dr. Stuart Long - Volume 1, dated on March 11, 2011	☐
	2	Oral and videotaped deposition of Dr. Stuart Long - Volume 2, dated on March 13, 2011	☐
	3	Oral and videotaped deposition of Dr. Stuart Long - Volume 3, dated on March 14, 2011	☐
	4	Oral and videotaped deposition of Dr. Warren L. Stutzman - Volume 1, dated on March 03, 2011	☐
	5	Oral and videotaped deposition of Dr. Warren L. Stutzman - Volume 2, dated on March 04, 2011	☐
	6	The oral and videotaped deposition of Dwight Jaggard - Volume 1, dated on March 08, 2011	☐
	7	The oral and videotaped deposition of Dwight Jaggard - Volume 2, dated on March 09, 2011	☐
	8	The oral and videotaped deposition of Dwight Jaggard - Volume 3, dated on March 10, 2011	☐
	9	Transcript of pretrial hearing before the Honorable Leonard Davis, US District Judge - 2:00 PM, dated on May 16, 2011	☐
	10	Transcript of jury trial before the Honorable Leonard Davis US District Judge - 8:00 AM, dated on May 17, 2011	☐
	11	Transcript of jury trial before the Honorable Leonard Davis, US District Judge - 1:10 PM, dated on May 17, 2011	☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	12	Transcript of jury trial before the Honorable Leonard Davis - 8:45 AM, dated on May 18, 2011	☐
	13	Transcript of jury trial before the Honorable Leonard Davis - 1:00 PM, dated on May 18, 2011	☐
	14	Transcript of jury trial before the Honorable Leonard Davis - 8:45 AM, dated on May 19, 2011	☐
	15	Transcript of jury trial before the Honorable Leonard Davis - 1:00 PM, dated on May 19, 2011	☐
	16	Transcript of jury trial before the Honorable Leonard Davis - 12:30 PM, dated on May 20, 2011	☐
	17	Transcript of jury trial before the Honorable Leonard Davis - 8:30 AM, dated on May 20, 2011	☐
	18	Transcript of jury trial before the Honorable Leonard Davis - 8:55 AM, dated on May 23, 2011	☐
	19	Demonstratives presented by Dr. Steven Best during trial, dated on May 19, 2011	☐
	20	Dr. Stuart Long infringement analysis presented during trial, dated on May 18, 2011	☐
	21	Borja, C., Fractal microstrip antennas : Antenas fractales microstrip, Universitat Politecnica de Catalunya, 1997	☒
	22	Campos, O., Multiband and miniature fractal antennas study : Estudi d'antenes fractal multibanda i en miniatura, Universitat Politecnica de Catalunya, 1998	☒

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	23	Verdura, O., Miniature fractal antenna : Antena fractal miniatura, Universitat Politecnica de Catalunya, 1997	☒

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EXAMINER SIGNATURE

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	12228487
Filing Date	2008-08-13
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	Nguyen, Hoang V.
Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20040027295		2004-02-12	HUBER ET AL	

If you wish to add additional U.S. Published Application citation information please click the Add button.

FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐

If you wish to add additional Foreign Patent Document citation information please click the Add button

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V.
	Attorney Docket Number	47005-P018WUSC1

	1	Action closing prosecution for US patent 7411556 - 95/001462, dated on December 14, 2011	☐
	2	Patent owner's response to Action Closing Prosecution for US patent 7411556 - 95/001462 , 95/000590, dated on January 17, 2012	☐
	3	Third party requester's comments to patent owner's reply of January 07, 2012 for US patent 7411556 - 95/0001462, dated on February 16, 2012	☐

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EXAMINER SIGNATURE

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

Electronic Acknowledgement Receipt

EFS ID:	12264000
Application Number:	12228487
International Application Number:	
Confirmation Number:	6222
Title of Invention:	MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES
First Named Inventor/Applicant Name:	Jaume Anguera Pros
Customer Number:	61060
Filer:	Ross Robinson/Brenda Brown
Filer Authorized By:	Ross Robinson
Attorney Docket Number:	47005-P018WUSC1
Receipt Date:	09-MAR-2012
Filing Date:	13-AUG-2008
Time Stamp:	10:00:09
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	IDS47005P018WUSC1.pdf	196847 3a945eaba5a6a976a2e1a341e579acaaf3122ba7	no	2
Warnings:					
Information:					

2	Non Patent Literature	NPL03R0000262H.pdf	1336962 06e048d549e50b5ef09bedacf9a037f3159ca082	no	33
Warnings:					
Information:					
3	Non Patent Literature	NPL02R000025I2.pdf	4100346 0ebb22501fefdde74ab26e7e1715ad28d8bde876	no	51
Warnings:					
Information:					
4	Non Patent Literature	NPL01R000024QU.pdf	1271340 766f13cc48fde4bf3f67db2d19ab694296d818f8	no	39
Warnings:					
Information:					
5	Information Disclosure Statement (IDS) Form (SB08)	IDSStatementByApplicant47005P018WUSC1.pdf	232247 292adb55ed75a5ace7276564813e44072f7c5be6	no	2
Warnings:					
Information:					
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		Total Files Size (in bytes):	7137742		

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<u>New Applications Under 35 U.S.C. 111</u>
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

<u>National Stage of an International Application under 35 U.S.C. 371</u>
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

<u>New International Application Filed with the USPTO as a Receiving Office</u>
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted via the Office electronic filing system in accordance with § 1.6(a)(4).

Dated: March 9, 2012
Electronic Signature for Brenda I. Brown: /Brenda I. Brown/

Docket No.: 47005-P018WUSC1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jaume Anguera Pros et al.

Application No.: 12/228,487 Confirmation No.: 6222

Filed: August 13, 2008 Art Unit: 2821

For: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES Examiner: H. V. Nguyen

INFORMATION DISCLOSURE STATEMENT (IDS)

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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Dated: March 9, 2012

Respectfully submitted,

Electronic signature: /Shoaib A. Mithani/
Shoaib A. Mithani
Registration No.: 61,654
WINSTEAD PC
P.O. Box 131851
Dallas, Texas 75313
(214) 745-5400
Attorneys For Applicant

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

61060 7590 04/16/2012

WINSTEAD PC
P.O. BOX 131851
DALLAS, TX 75313

EXAMINER	
NGUYEN, HOANG V	
ART UNIT	PAPER NUMBER
2821	

DATE MAILED: 04/16/2012

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/228,487	08/13/2008	Jaume Anguera Pros	47005-P018WUSC1	6222

TITLE OF INVENTION: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1740	$300	$0	$2040	07/16/2012

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PTOL-85 (Rev. 02/11)

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

61060 7590 04/16/2012

WINSTEAD PC
P.O. BOX 131851
DALLAS, TX 75313

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/228,487	08/13/2008	Jaume Anguera Pros	47005-P018WUSC1	6222

TITLE OF INVENTION: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1740	$300	$0	$2040	07/16/2012

EXAMINER	ART UNIT	CLASS-SUBCLASS
NGUYEN, HOANG V	2821	343-7000MS

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:

❑ Issue Fee

❑ Publication Fee (No small entity discount permitted)

❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): (**Please first reapply any previously paid issue fee shown above**)

❑ A check is enclosed.

❑ Payment by credit card. Form PTO-2038 is attached.

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

❑ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

❑ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/228,487	08/13/2008	Jaume Anguera Pros	47005-P018WUSC1	6222

61060 7590 04/16/2012

WINSTEAD PC
P.O. BOX 131851
DALLAS, TX 75313

EXAMINER	
NGUYEN, HOANG V	
ART UNIT	PAPER NUMBER
2821	

DATE MAILED: 04/16/2012

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 482 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 482 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No.	Applicant(s)	
	12/228,487	PROS ET AL.	
	Examiner	Art Unit	
	HOANG V. NGUYEN	2821	

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

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *RCE filed 6/8/2011*.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *16-60*.
4. ☐ 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 the:
      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)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date See Continuation Sheet
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/HOANG V NGUYEN/
Primary Examiner, Art Unit 2821

Continuation of Attachment(s) 3. Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date: 6/8/11; 9/12/11; 10/5/11; 12/15/11; 3/9/12.

Allowable Subject Matter

1. Claims 16-60 are allowed.

2. The following is an examiner's statement of reasons for allowance:

Regarding claim 16, none of the prior art of record, either taken alone or in combination, fairly teaches or suggests a mobile communication device comprising, in combination with all other limitations in the claim, a multi-band antenna capable of operating at multiple frequency bands, the multi-band antenna including an antenna element; wherein the antenna element operates in cooperation with the ground plane layer; the antenna element comprising a common conductor; a first radiating arm connected to the common conductor; a second radiating arm connected to the common conductor; wherein the common conductor includes a feeding port, the feeding port being coupled to the feeding point; wherein at least a portion of the first radiating arm and at least a portion of the second radiating arm are arranged on different planes; wherein the first radiating arm is at least partially shaped according to a grid-dimension curve.

Claims 17-29 are allowed for depending on claim 16.

Regarding claim 30, none of the prior art of record, either taken alone or in combination, fairly teaches or suggests a mobile communication device comprising, in combination with all other limitations in the claim, a multi-band antenna capable of operating at multiple frequency bands, the multi-band antenna including an antenna element; wherein the antenna element is coupled to the feeding point and operates in cooperation with the ground plane layer; the antenna element comprising a first conductor, the first conductor comprising a first radiating arm having a grid-dimension section shaped according to a grid-dimension curve; a second conductor

arranged at a predetermined distance from the first conductor and electromagnetically coupled to the first conductor, the second conductor comprising a planar section.

Claims 31-45 are allowed for depending on claim 30.

Regarding claim 46, none of the prior art of record, either taken alone or in combination, fairly teaches or suggests a mobile communication device comprising, in combination with all other limitations in the claim, a multi-band antenna capable of operating at multiple frequency bands, the multi-band antenna including a dielectric mounting structure having a plurality of surfaces; an antenna element, the antenna element being coupled to the feeding point and operating in cooperation with the ground plane layer; wherein the antenna element comprises a first radiating arm arranged on two or more surfaces of the plurality of surfaces of the dielectric mounting structure; the first radiating arm comprising a first section shaped according to a grid-dimension curve; a second section connected to the grid-dimension section, the second section having a width different from a width of the first section; and wherein the printed circuit board, the communication circuitry, and the multi-band antenna are arranged inside the device housing.

Claims 47-60 are allowed for depending on claim 46.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Inquiry

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, Jacob Y. Choi can be reached on (571) 272-2367. 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

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

12228487 - GAU: 2821

PTO/SB/08a (07-10)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	12228487
Filing Date	2008-08-13
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	Nguyen, Hoang V
Attorney Docket Number	47005-P018WUSC1

FORM 1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5933330		1999-08-03	Beutler et al	
	2	6285327		2001-09-04	See	
	3	6483462		2002-11-19	Weinberger	
	4	6762723		2004-07-13	Nallo et al	
	5	6781548		2004-08-24	Wen et al	

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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FOREIGN PATENT DOCUMENTS

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OPAP IAP4 JUN 08 2011 PATENT & TRADEMARK OFFICE

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
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NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	Paschen , D. A. ; Olson , S. A crossed-slot antenna with an infinite balun feed. Antenna Applications Symposium, 1995. 19950920	☐
	2	McCormick , J. A Low-profile electrically small VHF antenna. 15th Annual Symposium on the USAF antenna reserach and development program 19651012	☐
	3	Watson , T. ; Friesser , J. A phase shift direction finding technique. Annual Symposium on the USAF antenna research and development program 19571021	☐
	4	Zhang , S. Huff , G. ; Bernhard , T. Antenna efficiency and gain of two new compact microstrip antennas. Antenna Applications symposium, 2001 20010919	☐
	5	Meier , K. ; Burkhard , M. ; Schmid , T. et al Broadband calibration of E-field probes in Lossy Media. IEEE Transactions on Microwave Theory and Techniques 19961001	☐
	6	NA Defendants' Motion to Clarify Claim Construction - Document 854. Defendants 20110418	☐
	7	Jones, Michael E. Defendants' opposition to Fractus SA objections to the Court's March 9, 2011 Order - Document 780. Baker Botts, LLP 20110331	☐

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	Attorney Docket Number	47005-P018WUSC1

	8	Nokia Mobile Phones Exhibit 9: Internal Photographs FCC ID: LJPNPW-1NB. Federal Communication Commission - FCC, 20010215	☐
	9	Naik , A. ; Bathnagar , P. S. Experimental study on stacked ring coupled triangular microstrip antenna Antenna Applications Symposium, 1994	☐
	10	Stutzman , W. L. Expert report of Dr. Warren L. Stutzman (redacted) - expert witness retained by Fractus. Fractus, 20110223	☐
	11	Jaggard , D. L. Expert report of Dwight L. Jaggard (redacted) - expert witness retained by Fractus. Fractus, 20110223	☐
	12	Long , S. Expert report of Stuart Long (redacted) - expert witness retained by Fractus. Fractus, 20110223	☐
	13	Lyon , J. ; Rassweiler , G. ; Chen , C. Ferrite-loading effects on helical and spiral antennas. 15th Annual Symposium on the USAF antenna reserach and development program, 19651012	☐
	14	Graff , B. Form 731 Corrections: GMLNSW-4DX M. Flom Associates - MFA, 20000424	☐
	15	Jaggard , D. L. Fractal electrodynamics and modeling. Directions in electromagnetic wave modeling 19910101	☐
	16	NA Fractus SA's opening claim construction brief - Exhibit 2 - Parties' Agreed Constructions. Fractus 20100716	☐
	17	NA Fractus SA's opening claim construction brief - Letter Fractus - Case 6:09-cv-00203-LED-JDL 20100716	☐
	18	NA Fractus SA's Opening Claim Construction Brief with Parties' Proposed and Agreed Constructions in the case of Fractus SA v. Samsung Electornics Co. Ltd. et al. Fractus - Case 6:09-cv-00203-LED-JDL 20100716	☐

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	Attorney Docket Number	47005-P018WUSC1

	19	NA Fractus SA's opening claim construction brief, - Exhibit 1 - Parties' Proposed Constructions - Case 6:09-cv-00203-LED-JDL Fractus, 20100716	☐
	20	Howe , Micah J. Fractus, S.A.'s objections to the Court's March 9, 2011, Order - Document 768. Susman Godfrey LLP 20110325	☐
	21	Howe , M. Fractus's Response to Defendants' Motion to Clarify Claim Construction - Document 887. Susman and Godfrey 20110425	☐
	22	NA Fractus's sur-reply to defendants' motion for reconsideration of the court's december 17, 2010 claim construction order based on newly-available evidence - Document 666. Fractus 20110308	☐
	23	Behncke , M. Fractus's surreply to defendants' Motion for Summary Judgment re publication dates of three references - Document 876. Susman Godfrey LLP 20110420	☐
	24	Cristal , E. G. et al Hairpin-line and hybrid hairpin-line / Half-wave parallel-coupled-line filers. Microwave Theory and Techniques, IEEE Transactions on 19721101	☐
	25	NA Infringement Chart - Kyocera MARBL. Fractus 20091105	☐
	26	NA Infringement Chart - Kyocera NEO E1100. Fractus 20091105	☐
	27	NA Infringement Chart - Kyocera S2400. Fractus 20091105	☐
	28	NA Infringement Chart - LG Aloha LX140. Fractus 20091105	☐
	29	NA Infringement Chart - LG AX155. Fractus 20091105	☐

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	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	30	NA Infringement Chart - LG AX380. Fractus 20091105	☐
	31	NA Infringement Chart - LG AX8600. Fractus 20091105	☐
	32	NA Infringement Chart - LG Chocolate VX8550. Fractus 20091105	☐
	33	NA Infringement Chart - LG enV Touch VX1100. Fractus 20091105	☐
	34	NA Infringement Chart - LG EnV3 VX9200. Fractus 20091105	☐
	35	NA Infringement Chart - LG Flare LX165. Fractus 20091105	☐
	36	NA Infringement Chart - LG Lotus. Fractus 20091105	☐
	37	NA Infringement Chart - LG MUZIQ LX570. Fractus 20091105	☐
	38	NA Infringement Chart - LG Rumor. Fractus 20091105	☐
	39	NA Infringement Chart - LG Shine CU720. Fractus 20091105	☐
	40	NA Infringement Chart - LG Voyager VX10000. Fractus 20091105	☐

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	41	NA Infringement Chart - LG VU CU920. Fractus 20091105	☐
	42	NA Infringement Chart - LG VX5400. Fractus 20091105	☐
	43	NA Infringement Chart - LG VX5500. Fractus 20091105	☐
	44	NA Infringement Chart - LG VX8350. Fractus 20091105	☐
	45	NA Infringement Chart - LG VX8360. Fractus 20091105	☐
	46	NA Infringement Chart - LG VX8560 Chocolate 3. Fractus 20091105	☐
	47	NA Infringement Chart - LG VX9400. Fractus 20091105	☐
	48	NA Infringement Chart - Pantech Breeze C520. Fractus 20091105	☐
	49	NA Infringement Chart - Pantech DUO C810. Fractus 20091105	☐
	50	NA Infringement Chart - RIM Blackberry 8110. Fractus 20091105	☐

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

12228487 - GAU: 2821

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Attorney Docket Number	47005-P018WUSC1

FORM 2

U.S.PATENTS

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	Attorney Docket Number	47005-P018WUSC1

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	1	NA. Infringement Chart - RIM Blackberry 8120. Fractus 20091105	☐
	2	NA. Infringement Chart - RIM Blackberry 8130. Fractus 20091105	☐
	3	NA. Infringement Chart - RIM Blackberry 8220. Fractus 20091105	☐
	4	NA. Infringement Chart - RIM Blackberry 8310. Fractus 20091105	☐
	5	NA. Infringement Chart - RIM Blackberry 8320. Fractus 20091105	☐
	6	NA. Infringement Chart - RIM Blackberry 8330. Fractus 20091105	☐
	7	NA. Infringement Chart - RIM Blackberry 8820. Fractus 20091105	☐
	8	NA. Infringement Chart - RIM Blackberry 8830. Fractus 20091105	☐
	9	NA. Infringement Chart - RIM Blackberry Pearl 8100. Fractus 20091105	☐
	10	NA. Infringement Chart - Samsung FlipShot SCH-U900. Fractus 20091105	☐
	11	NA. Infringement Chart - Samsung M320. Fractus 20091105	☐

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487 12228487 - GAU: 2821
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	12	NA. Infringement Chart - Samsung SCH A127. Fractus 20091105	☐
	13	NA. Infringement Chart - Samsung SCH U340. Fractus 20091105	☐
	14	NA .Infringement Chart - Samsung SCH U410. Fractus 20091105	☐
	15	NA. Infringement Chart - Samsung SCH U700. Fractus 20091105	☐
	16	NA. Infringement Chart - Samsung SCH-A645. Fractus 20091105	☐
	17	NA. Infringement Chart - Samsung SCH-R430. Fractus 20091105	☐
	18	NA. Infringement Chart - Samsung SCH-R500. Fractus 20091105	☐
	19	NA. Infringement Chart - Samsung SCH-R600. Fractus 20091105	☐
	20	NA. Infringement Chart - Samsung SCH-U310. Fractus 20091105	☐
	21	NA. Infringement Chart - Samsung SCH-U520. Fractus 20091105	☐
	22	NA. Infringement Chart - Samsung SCH-U750. Fractus 20091105	☐

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	23	NA. Infringement Chart - Samsung SCH-U940. Fractus 20091105	☐
	24	NA. Infringement Chart - Samsung SGH A117. Fractus 20091105	☐
	25	NA. Infringement Chart - Samsung SGH A437. Fractus 20091105	☐
	26	NA. Infringement Chart - Samsung SGH A867. Fractus 20091105	☐
	27	NA. Infringement Chart - Samsung SGH T229. Fractus 20091105	☐
	28	NA. Infringement Chart - Samsung SGH T439. Fractus 20091105	☐
	29	NA. Infringement Chart - Samsung SGH T919. Fractus 20091105	☐
	30	NA. Infringement Chart - Samsung SGH-A237. Fractus 20091105	☐
	31	NA. Infringement Chart - Samsung SGH-A257. Fractus 20091105	☐
	32	NA. Infringement Chart - Samsung SGH-A837. Fractus 20091105	☐
	33	NA. Infringement Chart - Samsung SGH-T219. Fractus 20091105	☐

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	Attorney Docket Number	47005-P018WUSC1

	34	NA. Infringement Chart - Samsung SGH-T559. Fractus 20091105	☐
	35	NA .Infringement Chart - Samsung SGH-T639. Fractus 20091105	☐
	36	NA. Infringement Chart - Samsung SGH-T929. Fractus 20091105	☐
	37	NA. Infringement Chart - Samsung SPH-M550. Fractus 20091105	☐
	38	NA. Infringement Chart - Sanyo Katana II. Fractus 20091105	☐
	39	NA. Infringement Chart - Sanyo Katana LX. Fractus 20091105	☐
	40	NA. Infringement Chart - UTStarcom CDM7126. Fractus 20091105	☐
	41	Borja , C. ; Puente , C. Iterative network models to predict the performance of Sierpinski fractal antennas and networks. Antennas and Propagation Society International Symposium, 1999. IEEE 19990711	☐
	42	NA. Joint Motion to Dismiss Claims and Counterclaims re '850 and '822 - Document 843. Defendants 20110415	☐
	43	Ewing , A Letter and Engineering Test Report of FCC ID: GMLNPW-3 Test and Certification Center - TCC 20011219	☐
	44	NA. Letter from Baker Botts to Howison & Arnott LLP including exhibits. Baker Botts 20100805	☐

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	45	NA. Letter from Baker Botts to Kenyon & Kenyon LLP, Winstead PC and Howison & Arnott LLP including exhibits. Baker Botts, 20091028	☐
	46	Posio , E. Letter to FCC - About GMLNPW-3 complies with ANSI/IEEE C95.1-1992 Standard for Safety Levels. Nokia Mobile Phones, 20011207	☐
	47	Salow , S. Letter to FCC - About LJPNPW-1 NB complies with ANSI/IEEE C95.1-1992 Standard for Safety Levels. Nokia Mobile Phones, 20010226	☐
	48	Flom , M. Letter to FCC - Application form 731 and Engineering Test Report by Nokia Mobile Phones for FCC ID: LJPNPW-1NB M. Flom Associates - MFA, 20010312	☐
	49	NA Letter to FCC - Application form 731 and Engineering Test Report by Nokia Mobile Phones for FCC ID: LJPNSW-6NX M. Flom Associates, 19990401	☐
	50	Flom , M. Letter to FCC - Communication of replacing employee M. Flom Associates, 20000523	☐

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	1	Posio , E. Letter to FCC - Compliance Statement of GMLNPW-3 Nokia Mobile Phones 20011207	☐
	2	Posio , E. Letter to FCC - Electronic Serial Number for FCC ID: GMLNPW-3 Nokia Mobile Phones 20011207	☐
	3	Posio , E. Letter to FCC - Electronic Serial Number for FCC ID: GMLNSW-4DX Nokia Mobile Phones 20000207	☐
	4	Salow , S. Letter to FCC - FCC ID LJPNPW-1NB complies with OET Bulletin No 53 as referenced in Section 22.915 of the Commissions rules and with EIA/TIA/IS-54-B Nokia Mobile Phones 20010226	☐
	5	Myrskog , M Letter to FCC - Letter that will authorize the appointment of MORTON FLOM Eng and/or FLOMASSOCIATES INC to act as their Agent in all FCC matters Nokia Mobile Phones 20000914	☐
	6	Flom , M. Letter to FCC - Nokia SAR Information M. Flom Associates - MFA 20000519	☐
	7	Posio , E. Letter to FCC - Request for confidentiality of the information accompanying the application of FCC ID: GMLNPW-3 Nokia Mobile Phones 20011207	☐
	8	Posio , E. Letter to FCC - Request for confidentiality on the information accompanying the application of FCC ID: GMLNSW-4DX Nokia Mobile Phones 20000207	☐
	9	Graff , W. Letter to FCC - Test Report GMLNSW-4DX M. Flom Associates - MFA 20000317	☐
	10	Posio , E. Letter to FCC about GMLNSW-4DX complies with ANSI/IEEE C95.1-1992 Standard for Safety Levels Nokia Mobile Phones 20000307	☐
	11	Wikka , K. Letter to FCC that will authorize the appointment of MORTON FLOM Eng and/or FLOMASSOCIATES INC to act as their Agent in all FCC matters Nokia Mobile Phones 19990805	☐

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	12	Tribble, M. L. Letter to John D. Love - Document 715 - Permission to file a summary judgment motion of no indefiniteness on the issues wher the Court's Report and Recommendation already has held that the claim term is not indefinite Susman Godfrey 20110318	☐
	13	Tribble , M. L. Letter to John D. Love - Document 716 - Permission to file a partial summary judgement motion on infringement. Susman Godfrey , LLP 20110318	☐
	14	Sirola, Neil P. Letter to John D. Love - Document 721 - Permission to file a motion for summary judgment of invalidity of the following 7 asserted claims from the MLV, patent family... Baker Botts, LLP 20110318	☐
	15	Flom , M. Letter to modify the Emission Designator M. Flom Associates - MFA 20010330	☐
	16	Love , J. Minute Entry re Hearing on 4-21-11 - Document 890 United States Distric Court for the Eastern Distric of Texas - Tyler Division 20110427	☐
	17	Nokia Nokia MBD-11 Mobile Holder - SAR Specification Nokia 20020301	☐
	18	NA Nokia. Antenna Photos - FCC ID: GMLNPW-3 Federal Communications Commission - FCC 20020219	☐
	19	Ho , T. Notice of Allowance of US patent application no. 12/652974 dated on February 17, 2011 USPTO 20110217	☐
	20	NA OET Exhibits List for FCC ID: GMLNSW-4DX Office of Engineering and Technology - FCC 20000908	☐
	21	NA OET Exhibits list for FCC ID: LJPNPW-1NB Federal Communications Commission - FCC 20010503	☐
	22	NA OET Exhibits list for FCC ID: LJPNSW-6NX Federal Communications Commission - FCC 19990708	☐

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	Attorney Docket Number	47005-P018WUSC1

	23	Menefee , James Office Action for the US patent 95/001389 dated on August 12, 2010 USPTO 20100812	☐
	24	Lee , B. T. Office action for the US patent application 10/181790 dated on August 27, 2004 USPTO 20040827	☐
	25	Lee , B. T. Office action for the US patent application 10/181790 dated on June 2, 2005 USPTO 20050602	☐
	26	Ho , T. Office Action of US patent application no. 12/652974 dated June 23, 2010 USPTO 20100623	☐
	27	Menefee , J. Office Action of US patent application no. 95/000590 and 95/001462 dated on May 6, 2011 USPTO 20110506	☐
	28	NA Order - Document 670 Court 20110309	☐
	29	Davis, Leonard Order - Document 783 United States District Judge 20110401	☐
	30	Love , J. D. Order - Document 868 United States Magristrate Judge 20110419	☐
	31	NA Plaintiff Fractus SA's answer to amended counterclaims of defendant Pantech Wireless Inc to Fractus's second amended complaint - Document 696 Fractus 20110315	☐
	32	NA Plaintiff Fractus SA's answer to second amended counterclaims of defendant HTC Corporation to Fractus's second amended complaint - Document 678 Fractus 20110314	☐
	33	NA Plaintiff Fractus SA's answer to second amended counterclaims of defendant HTC to Fractus's second amended complaint - Document 680 Fractus 20110314	☐

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	34	NA Plaintiff Fractus SA's answer to second amended counterclaims of defendant LG Electronics to Fractus's second amended complaint - Document 694 Fractus 20110315	☐
	35	NA Plaintiff Fractus SA's answer to second amended counterclaims of defendant Samsung to Fractus's second amended complaint - Document 695 Fractus 20110315	☐
	36	Salow , S. Request for confidentiality of the information accompanyinh the application of FCC ID: LJPNPW-1NB M. Flom Associates - MFA 20010226	☐
	37	Lee , B. T. Response to office action for the US patent application 10/181790 dated on August 27, 2004 USPTO 20041208	☐
	38	Shoaib , M. Response to the Office Action dated on June 23, 2010 of US patent application no. 12/652974 Winstead 20101220	☐
	39	Sterne , R. G. Response to the Office Action for the US patent 95/001390 dated on August 19, 2010 Sterne, Kessler, Goldstein & Fox PLLC 20101119	☐
	40	NA SAR- Evaluation - DASY3 Dipole ValidationKit - Type: D1900V2 - Serial: 511 Schimd and Partner Engineering AG 20010213	☐
	41	NA SAR- Evaluation - DASY3 Dipole ValidationKit - Type: D835V2 - Serial: 405 Schmid and Partner Engineering AG 20010213	☐
	42	NA Second amended complaint for patent infringement - Case 6:09-cv-00203 - Document 222 Fractus 20091202	☐
	43	Hohlfeld , R. G. ; Cohen N. Self-similarity and the geometric requirements for frequency independence in antennae Fractals 19990117	☐
	44	NA Stipulation of Dismissal of all Claims and Counterclaims re '850 and '822 - Document 841 Defendants 20110415	☐

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	45	Campos, O. Study of multiband and miniature fractal antennas Universitat Politècnica de Catalunya 19980101	☐
	46	IEEE Standards Uncertainty System Check (Dipole Validation) - IEEE P1528 Schmid and Partner Engineering AG 20030101	☐
	47	NA Webster's New Collegiate Dictionary G & C Merriam Co. 19810101	☐
	48	NA Declaration of Jeffery D. Baxter - Including Exhibits: J, K, L, M ,N ,O, P, Q, R, S, T, U, Z, AA, KK, LL, WW, BBB, EEE, GGG, HHH, III, KKK, MMM, NNN, OOO, PPP, QQQ, TTT, UUU, VVV, WWW, YYY, ZZZ, AAAA, BBBB Defendants 20100730	☐

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U.S.PATENTS

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	1	7446708		2008-11-04	Nguyen et al	

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	1	Document 415 - P.R. 4-3 joint claim construction statement, dated on June 14, 2010	☐
	2	Document 429 - Declaration of Jeffery D. Baxter - Including Exhibits: J, K, L, M ,N ,O, P, Q, R, S, T, U, Z, AA, KK, LL, dated on July 30, 2010	☐
	3	Document 452 - Defendant's reply in support of their motion for summary judgment of invalidity based on indefiniteness and lack of written description for certain terms with exhibits WW, BBB, EEE, GGG, HHH, III, KKK, MMM, NNN, OOO, PPP, Q, dated on August 30, 2010	☐
	4	Document 641 - Defendant HTC America, Inc's second amended answer and counterclaim to plaintiff's second amended complaint, dated on February 25, 2011	☐
	5	Document 642 - Defendant HTC Corporation's second amended answer and counterclaim to plaintiff's second amended complaint, dated on February 25, 2011	☐
	6	Document 889 - Reply in support of defendants' motion to clarify claim construction, dated on April 27, 2011	☐
	7	Document 893 - Fractus SA's surreply to defendant's motion to clarify claim construction, April 29, 2011	☐
	8	Document 900 - Order, dated on April 29, 2011	☐
	9	Document 901 - Report and recommendation of United States Magistrate Judge, dated on May 02, 2011	☐
	10	Document 902 - Fractus SA's objections to defendants' prior art notice, dated on May 02, 2011	☐
	11	Document 915 - Defendants' response to plaintiff's objections to defendants notice of prior art, dated on May 05, 2011	☐

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	12	Document 933 - Defendants' motion for reconsideration of, and objections to, the May 2, 2011 report and recommendation clarifying claim construction, dated on May 09, 2011	☐
	13	Document 939 - Fractus's response to defendants' motion for reconsideration of and objections to the May 2, 2011, report and recommendations clarifying claim construction, dated on May 10, 2011	☐
	14	Document 968 - Order, dated on May 13, 2011	☐
	15	Document 971 - Order, dated on May 13, 2011	☐
	16	Internal Photos - FCC ID: GMLNPW-3 , Federal Communications Commission , December 19, 2001	☐
	17	Andersen , J. B. The handbook of antenna design - Low- and medium-gain microwave antennas. Rudge , A. W. et al - IEE Eletromagnetic Waves Series; Peter Peregrinus Ltd. (2nd ed.). Volumes 1 and 2. Pag 526-543. 1986.	☐

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	1					

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐

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NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang
	Attorney Docket Number	47005-P018WUSC1

/H.N./	1	Inter partes reexamination of US patent 7411556 - 95/001462 , 95/001590 - Third party requester's comments to patent owner's reply of August 08, 2011, dated on September 07, 2011	☐
/H.N./	2	Decision sua sponte to merge reexamination proceedings of US patent 7411556 - 95/000590 - 95/001462 - dated on May 05, 2011	☐
/H.N./	3	Response to the Office Action dated May 6, 2011 of US patent US7411556 - 95/001462 - 95/000590 - , dated on August 06, 2011	☐
/H.N./	4	Notice of allowance of US patent application no. 12/652974 dated on August 10, 2011	☐

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EXAMINER SIGNATURE

Examiner Signature	/Hoang Nguyen/	Date Considered	04/12/2012

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[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12228487	PROS ET AL.
	Examiner	Art Unit
	HOANG V NGUYEN	2821

SEARCHED			
Class	Subclass	Date	Examiner
343	700MS, 702, 895, 833, 834	5/19/11	HN
343	700MS, 702, 895, 833, 834	4/12/12	HN

SEARCH NOTES		
Search Notes	Date	Examiner
see EAST search history	5/19/11	HN
EAST	4/12/12	HN
Inventor search	4/12/12	HN

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner
343	700MS, 895, 702	5/19/11	HN
343	700MS, 895, 702	4/12/12	HN

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12228487	PROS ET AL.
	Examiner	**Art Unit**
	HOANG V NGUYEN	2821

ORIGINAL		INTERNATIONAL CLASSIFICATION										
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED					
343	700MS	H	0	1	Q	1 / 38 (2006.0)						
CROSS REFERENCE(S)		H	0	1	Q	1 / 36 (2006.0)						
		H	0	1	Q	1 / 24 (2006.0)						

CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				
343	895	702			

☐ Claims renumbered in the same order as presented by applicant ☒ CPA ☐ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1	2	17	18	33	34	49								
	2	3	18	19	34	35	50								
	3	4	19	20	35	36	51								
	4	5	20	21	36	37	52								
	5	6	21	22	37	38	53								
	6	7	22	23	38	39	54								
	7	8	23	24	39	40	55								
	8	9	24	25	40	44	56								
	9	10	25	26	41	41	57								
	10	11	26	27	42	42	58								
	11	12	27	28	43	43	59								
	12	13	28	29	44	45	60								
	13	14	29	30	45										
	14	15	30	31	46										
	15	16	31	32	47										
1	16	17	32	33	48										

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	45	
/HOANG V NGUYEN/ Primary Examiner.Art Unit 2821	04/12/2012	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	10

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	Examiner	Art Unit
	HOANG V NGUYEN	2821

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

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CLAIM		DATE								
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	2	✓	-	-	-					
	3	✓	-	-	-					
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	5	✓	-	-	-					
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18	33		=	=	=					
19	34		=	=	=					
20	35		=	=	=					
21	36		=	=	=					

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Final	Original	08/23/2010	01/10/2011	05/19/2011	04/12/2012					
22	37		=	=	=					
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26	41		=	=	=					
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41	57		=	=	=					
42	58		=	=	=					
43	59		=	=	=					
45	60		=	=	=					

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

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/H.N./	1	20040027295		2004-02-12	HUBER ET AL	

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	Art Unit	2821
	Examiner Name	Nguyen, Hoang V.
	Attorney Docket Number	47005-P018WUSC1

/H.N./	1	Action closing prosecution for US patent 7411556 - 95/001462, dated on December 14, 2011	☐
/H.N./	2	Patent owner's response to Action Closing Prosecution for US patent 7411556 - 95/001462 , 95/000590, dated on January 17, 2012	☐
/H.N./	3	Third party requester's comments to patent owner's reply of January 07, 2012 for US patent 7411556 - 95/0001462, dated on February 16, 2012	☐

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EXAMINER SIGNATURE

Examiner Signature	/Hoang Nguyen/	Date Considered	04/12/2012

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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	725564	antenna	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/12 11:02
L2	783474	(circuit adj board) or pcb	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/12 11:02
L3	2935478	feed$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/12 11:02
L4	2288589	ground$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/12 11:02
L5	657250	(two or dual or second or multi$3 or plurality) near3 (band or frequenc$3 or resonance)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/12 11:03
L6	51	grid adj dimension adj curve	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/12 11:04
L7	557	space adj filling adj curve	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/12 11:04
L8	85	1 and 2 and 3 and 4 and 5 and (6 or 7)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/12 11:07

4/12/2012 11:07:41 AM

OPAP IAP17 DEC 15 2011 PATENT & TRADEMARK OFFICE

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

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	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	1	Oral and videotaped deposition of Dr. Stuart Long - Volume 1, dated on March 11, 2011	☐
	2	Oral and videotaped deposition of Dr. Stuart Long - Volume 2, dated on March 13, 2011	☐
	3	Oral and videotaped deposition of Dr. Stuart Long - Volume 3, dated on March 14, 2011	☐
	4	Oral and videotaped deposition of Dr. Warren L. Stutzman - Volume 1, dated on March 03, 2011	☐
	5	Oral and videotaped deposition of Dr. Warren L. Stutzman - Volume 2, dated on March 04, 2011	☐
	6	The oral and videotaped deposition of Dwight Jaggard - Volume 1, dated on March 08, 2011	☐
	7	The oral and videotaped deposition of Dwight Jaggard - Volume 2, dated on March 09, 2011	☐
	8	The oral and videotaped deposition of Dwight Jaggard - Volume 3, dated on March 10, 2011	☐
	9	Transcript of pretrial hearing before the Honorable Leonard Davis, US District Judge - 2:00 PM, dated on May 16, 2011	☐
	10	Transcript of jury trial before the Honorable Leonard Davis US District Judge - 8:00 AM, dated on May 17, 2011	☐
	11	Transcript of jury trial before the Honorable Leonard Davis, US District Judge - 1:10 PM, dated on May 17, 2011	☐

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	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	12	Transcript of jury trial before the Honorable Leonard Davis - 8:45 AM, dated on May 18, 2011	☐
	13	Transcript of jury trial before the Honorable Leonard Davis - 1:00 PM, dated on May 18, 2011	☐
	14	Transcript of jury trial before the Honorable Leonard Davis - 8:45 AM, dated on May 19, 2011	☐
	15	Transcript of jury trial before the Honorable Leonard Davis - 1:00 PM, dated on May 19, 2011	☐
	16	Transcript of jury trial before the Honorable Leonard Davis - 12:30 PM, dated on May 20, 2011	☐
	17	Transcript of jury trial before the Honorable Leonard Davis - 8:30 AM, dated on May 20, 2011	☐
	18	Transcript of jury trial before the Honorable Leonard Davis - 8:55 AM, dated on May 23, 2011	☐
	19	Demonstratives presented by Dr. Steven Best during trial, dated on May 19, 2011	☐
	20	Dr. Stuart Long infringement analysis presented during trial, dated on May 18, 2011	☐
	21	Borja, C., Fractal microstrip antennas : Antenas fractales microstrip, Universitat Politecnica de Catalunya, 1997	☒
	22	Campos, O., Multiband and miniature fractal antennas study : Estudi d'antenes fractal multibanda i en miniatura, Universitat Politecnica de Catalunya, 1998	☒

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	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	23	Verdura, O., Miniature fractal antenna : Antena fractal miniatura, Universitat Politecnica de Catalunya, 1997	☒

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EXAMINER SIGNATURE

Examiner Signature	/Hoang Nguyen/	Date Considered	04/12/2012

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Request for Continued Examination (RCE) Transmittal

Address to:
Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Application Number	12/228,487-Conf. #6222
Filing Date	August 13, 2008
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	H. V. Nguyen
Attorney Docket Number	47005-P018WUSC1

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.

Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. See Instruction Sheet for RCEs (not to be submitted to the USPTO) on page 2.

1. Submission required under 37 CFR 1.114 Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

   a. [ ] Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

      i. [ ] Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____

      ii. [ ] Other _____

   b. [X] Enclosed

      i. [ ] Amendment/Reply

      ii. [ ] Affidavit(s)/Declaration(s)

      iii. [X] Information Disclosure Statement (IDS)

      iv. [ ] Other _____

2. Miscellaneous

   a. [ ] Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

   b. [ ] Other _____

3. Fees The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.

   a. [X] The Director is hereby authorized to charge the following fees, any underpayment of fees, or credit any Overpayments, to Deposit Account No. 23-2426 .

      i. [X] RCE fee required under 37 CFR 1.17(e)

      ii. [ ] Extension of time fee (37 CFR 1.136 and 1.17)

      iii. [ ] Other _____

   b. [ ] Check in the amount of $ _____ enclosed

   c. [ ] Payment by credit card (Form PTO-2038 enclosed)

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Signature	/Shoaib A. Mithani/	Date	May 24, 2012
Name (Print/Type)	Shoaib A. Mithani	Registration No.	61,654

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted via the Office electronic filing system in accordance with § 1.6(a)(4).

Dated: May 24, 2012 Electronic Signature for Brenda I. Brown: /Brenda I. Brown/

5859553v.1 47005/P018WUSC1

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

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	Attorney Docket Number	47005-P018WUSC1

	1	US95/001462 , 95/000590 - Right of appeal notice for US patent 7411556, dated on March 12, 2012	☐
	2	Document 1082 - Joint motion to dismiss HTC, dated September 13, 2011	☐
	3	Document 1088 - Samsung's motion to determine intervening rights in view of new Federal Circuit case law or, in the alternative, to stay the case pending the outcome of reexamination, dated October 19, 2011	☐
	4	Document 1092 - Samsung's reply in support of its motion to determine intervening rights in view of new Federal Circuit case law or, in the alternative, to stay the case pending the outcome of reexamination, dated November 14, 2011	☐
	5	Document 1091 - Fractus's response to Samsung's motion to determine intervening rights or to stay the case pending the outcome of reexamination, dated November 02, 2011	☐
	6	Document 1083 - Order - Final consent judgement HTC, dated September 15, 2011	☐
	7	US95/001413 - US95/000593 - US95/000598 - Action Closing Prosecution dated on April 20, 2012 for US patent 7148850, dated April 20, 2012	☐

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted via the Office electronic filing system in accordance with § 1.6(a)(4).

Dated: May 24, 2012
Electronic Signature for Brenda I. Brown: /Brenda I. Brown/

Docket No.: 47005-P018WUSC1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jaume Anguera Pros et al.

Application No.: 12/228,487 Confirmation No.: 6222

Filed: August 13, 2008 Art Unit: 2821

For: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES Examiner: H. V. Nguyen

INFORMATION DISCLOSURE STATEMENT (IDS)

MS RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement, pursuant to 37 CFR 1.114(c), accompanies the Request for Continued Examination (37 CFR 1.114) submitted herewith.

Applicant has not submitted copies of each cited U.S. patent and U.S. patent application in accordance with 37 CFR 1.98(a)(2). Applicant submits herewith copies of any cited non-patent documents and foreign patent documents in accordance with 37 CFR 1.98(a)(2).

In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing of this Information Disclosure Statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 23-2426, under Order No. 47005-P018WUSC1.

Dated: May 24, 2012

Respectfully submitted,

Electronic signature: /Shoaib A. Mithani/
Shoaib A. Mithani
Registration No.: 61,654
WINSTEAD PC
P.O. Box 131851
Dallas, Texas 75313
(214) 745-5400
Attorneys For Applicant

Electronic Patent Application Fee Transmittal

Application Number:	12228487
Filing Date:	13-Aug-2008
Title of Invention:	MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES
First Named Inventor/Applicant Name:	Jaume Anguera Pros
Filer:	Ross Robinson/Brenda Brown
Attorney Docket Number:	47005-P018WUSC1

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Request for continued examination	1801	1	930	930
		Total in USD ($)		**930**

Electronic Acknowledgement Receipt	
EFS ID:	12853757
Application Number:	12228487
International Application Number:	
Confirmation Number:	6222
Title of Invention:	MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES
First Named Inventor/Applicant Name:	Jaume Anguera Pros
Customer Number:	61060
Filer:	Ross Robinson/Brenda Brown
Filer Authorized By:	Ross Robinson
Attorney Docket Number:	47005-P018WUSC1
Receipt Date:	24-MAY-2012
Filing Date:	13-AUG-2008
Time Stamp:	10:43:14
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$930
RAM confirmation Number	10618
Deposit Account	232426
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Continued Examination (RCE)	RCE47005P018WUSC1.pdf	147311 29c3dcd933f3f28f2c62cec1a12745e966fc8efb	no	1
Warnings:					
This is not a USPTO supplied RCE SB30 form.					
Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	IDSStatementByApplicant47005P018WUSC1.pdf	258720 1450be2e29292f35980c644a17805478f234a9a0	no	2
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	Transmittal Letter	IDS47005P018WUSC1.pdf	192167 4c14493c9fcb371bd291dd2f1a1a7d03fbc61bde	no	2
Warnings:					
Information:					
4	Non Patent Literature	NPL01Appeal.pdf	537227 544fef7011d58a5d7ca05285a909d73434fad28d	no	16
Warnings:					
Information:					
5	Non Patent Literature	NPL02.pdf	440945 35f45fbb35621b216eb5f5bf53995f767f162298	no	12
Warnings:					
Information:					
6	Non Patent Literature	NPL03.pdf	18776339 827901f90a5b06c9b696ce1c2f81e22cc5d3c499	no	469
Warnings:					
Information:					
7	Non Patent Literature	NPL03part0002.pdf	18502484 7a41605bef97ed404df5922b2b4c61b9bf684953	no	458
Warnings:					
Information:					
8	Non Patent Literature	NPL03part0003.pdf	16769271 d79b6fe3889caf2ea79a6a9b09ccdd8040451721	no	384
Warnings:					

Information:					
9	Non Patent Literature	NPL04.pdf	649162 e35bf48855749d5475df7898f7484c14db5fe863	no	19
Warnings:					
Information:					
10	Non Patent Literature	NPL05.pdf	8827767 0f84432f0693140e2de83e645d583832b0013327	no	156
Warnings:					
Information:					
11	Non Patent Literature	NPL06.pdf	298318 5e9694284254b9378b16ac7822ce62e78a6d9a30	no	8
Warnings:					
Information:					
12	Non Patent Literature	NPL07.pdf	6095095 277f916087583e16b6b435cf5fd21f84252f004b	no	37
Warnings:					
Information:					
13	Fee Worksheet (SB06)	fee-info.pdf	30539 78f1bf6b9b80a7633c567577a745e26e3252c799	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	71525345	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

<u>New Applications Under 35 U.S.C. 111</u>
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

<u>National Stage of an International Application under 35 U.S.C. 371</u>
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

<u>New International Application Filed with the USPTO as a Receiving Office</u>
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 12/228,487	Filing Date 08/13/2008	☐ To be Mailed

APPLICATION AS FILED – PART I

	(Column 1)	(Column 2)	SMALL ENTITY ☐		OR	OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE ($)	FEE ($)		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

		(Column 1)		(Column 2)	(Column 3)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
AMENDMENT	**05/24/2012**	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 15	Minus	** 20	= 0	X $ =		OR	X $60=	0
	Independent (37 CFR 1.16(h))	* 1	Minus	***3	= 0	X $ =		OR	X $250=	0
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	**0**

		(Column 1)		(Column 2)	(Column 3)					
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
/LAJUAN HICKSON/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	12228487
Filing Date	2008-08-13
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	Nguyen, Hoang V
Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20040106428		2004-06-03	SHOJI	
	2	20040203529		2004-10-14	HONG ET AL	
	3	20050239519		2005-10-27	SAITOU ET AL	

If you wish to add additional U.S. Published Application citation information please click the Add button.

FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99**)		
	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

If you wish to add additional Foreign Patent Document citation information please click the Add button

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	US95/001462 , 95/000590 - Third party requester's notice of appeal for US patent 7411556, dated on April 12, 2012	☐
	2	US95/001462, 95/000590 - Reply to Third Party Requester's notice of appeal filed on April 12, 2012 for US patent 7411556, dated on May 31, 2012	☐
	3	US12/652974 - Notice of allowance dated on May 21, 2012	☐
	4	US13/029382 - Notice of allowance dated on May 10, 2012	☐
	5	Lu , Jui-Han ; Tang , Chia-Luan ; Wong , Kin-Lu, Single-feed slotted equilateral triangular microstrip antenna for circular polarization, IEEE Transactions on Antennas and Propagation, July 1999	☐

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

Electronic Acknowledgement Receipt

EFS ID:	13348398
Application Number:	12228487
International Application Number:	
Confirmation Number:	6222
Title of Invention:	MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES
First Named Inventor/Applicant Name:	Jaume Anguera Pros
Customer Number:	61060
Filer:	Ross Robinson/John Sheridan
Filer Authorized By:	Ross Robinson
Attorney Docket Number:	47005-P018WUSC1
Receipt Date:	26-JUL-2012
Filing Date:	13-AUG-2008
Time Stamp:	15:05:30
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Non Patent Literature	Lu.pdf	954530 c39e0009a4bc32567bcf2d09f0bbb8bb11dec23c	no	5

Warnings:	
Information:	

2	Miscellaneous Incoming Letter	IDS_statement.pdf	20403 91abcb1c2d6f22eca009542203282529aa594e42	no	2
Warnings:					
Information:					
3	Information Disclosure Statement (IDS) Form (SB08)	IDS_by_appl.pdf	60928 47daeae3e6afc5ba59601979c7251ffb5626029e	no	2
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
4	Non Patent Literature	Third_Party_Requesters_Notice_of_Appeal.pdf	471357 3ed648b25ddb2bab6ce5094d52f58f036e225ebe	no	7
Warnings:					
Information:					
5	Non Patent Literature	Reply_to_Third_Party_Requesters_NOA.pdf	1583419 6db603a0ad42b2d1038ea2405ec3981b8dede402	no	16
Warnings:					
Information:					
6	Non Patent Literature	NOA5-21-12.pdf	781411 939d30457e226c073f706a4fda47a82b63ddcb0b	no	5
Warnings:					
Information:					
7	Non Patent Literature	NOA5-10-12.pdf	1307130 72d541c3a76e79e27f14e499d61d8503b8a66a27	no	11
Warnings:					
Information:					
		Total Files Size (in bytes):	5179178		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted via the Office electronic filing system in accordance with § 1.6(a)(4).

Dated: July 26, 2012
Electronic Signature for John Sheridan: /John Sheridan/

Docket No.: 47005-P018WUSC1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jaume Anguera Pros et al.

Application No.: 12/228,487 Confirmation No.: 6222

Filed: August 13, 2008 Art Unit: 2821

For: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES Examiner: H. V. Nguyen

INFORMATION DISCLOSURE STATEMENT (IDS)

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed before the mailing date of a first Office Action after the filing of a Request for Continued Examination under 37 CFR 1.114, as far as is known to the undersigned (37 CFR 1.97(b)(4)).

Applicant has not submitted copies of each cited U.S. patent and U.S. patent application in accordance with 37 CFR 1.98(a)(2). Applicant submits herewith copies of any cited non-patent documents and foreign patent documents in accordance with 37 CFR 1.98(a)(2).

In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing of this Information Disclosure Statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 23-2426, under Order No. 47005-P018WUSC1.

Dated: July 26, 2012

Respectfully submitted,

Electronic signature: /Shoaib A. Mithani/
Shoaib A. Mithani
Registration No.: 61,654
WINSTEAD PC
P.O. Box 131851
Dallas, Texas 75313
(214) 745-5400
Attorneys For Applicant

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99**)		
	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V.
	Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20090231215		2009-09-17	TAURA	

If you wish to add additional U.S. Published Application citation information please click the Add button.

FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐

If you wish to add additional Foreign Patent Document citation information please click the Add button

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V.
	Attorney Docket Number	47005-P018WUSC1

	1	Carver , K. R. et al., Microstrip antenna technology, in "Microstrip antennas" to D.M. Pozar; IEEE Antennas and Propagation Society, 1995, Pages: 3-26	☐
	2	Munson , R. E., Conformal microstrip communication antenna, Symposium on USAF antenna Research and Development, 23th, October 1973	☐
	3		☐
	4		☐

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[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

Electronic Acknowledgement Receipt

EFS ID:	13972190
Application Number:	12228487
International Application Number:	
Confirmation Number:	6222
Title of Invention:	MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES
First Named Inventor/Applicant Name:	Jaume Anguera Pros
Customer Number:	61060
Filer:	Ross Robinson/Brenda Brown
Filer Authorized By:	Ross Robinson
Attorney Docket Number:	47005-P018WUSC1
Receipt Date:	12-OCT-2012
Filing Date:	13-AUG-2008
Time Stamp:	14:03:23
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		IDS47005P018WUSC1_1.pdf	329674 88b1bedf1e96f58c1d0543605cd0f843178f0a40	yes	4

	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Transmittal Letter		1	2	
	Information Disclosure Statement (IDS) Form (SB08)		3	4	
Warnings:					
Information:					
2	Non Patent Literature	MunsonREConformal_microstrip_communication_antenna_2.pdf	1989853 8bf2253cafae1d471c15eb879b80204f244c59e1	no	4
Warnings:					
Information:					
3	Non Patent Literature	CarverKRMicrostrip_antenna_technology_3.pdf	5717795 8a1c4706ad6723c56fbc83171ae176048382935b	no	26
Warnings:					
Information:					
		Total Files Size (in bytes):	8037322		

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New Applications Under 35 U.S.C. 111
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Dated: October 12, 2012
Electronic Signature for Brenda I. Brown: /Brenda I. Brown/

Docket No.: 47005-P018WUSC1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jaume Anguera Pros et al.

Application No.: 12/228,487 Confirmation No.: 6222

Filed: August 13, 2008 Art Unit: 2821

For: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES Examiner: H. V. Nguyen

INFORMATION DISCLOSURE STATEMENT (IDS)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Madam:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

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Dated: October 12, 2012

Respectfully submitted,

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99**)		
	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros et al.
	Art Unit	2821
	Examiner Name	H.V. Nguyen
	Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	8253633		2012-08-28	SANZ ET AL	
	2	8259016		2012-09-04	SANZ ET AL	

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					

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FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
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NON-PATENT LITERATURE DOCUMENTS

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros et al.
	Art Unit	2821
	Examiner Name	H.V. Nguyen
	Attorney Docket Number	47005-P018WUSC1

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	US95/001462 - US95/000590 - Inter partes reexamination certificate for US7411556	☐

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Examiner Signature		Date Considered	

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US007411556C1

(12) **INTER PARTES REEXAMINATION CERTIFICATE** (0432nd)
United States Patent
Sanz et al.

(10) **Number: US 7,411,556 C1**
(45) **Certificate Issued: Aug. 21, 2012**

(54) **MULTI-BAND MONOPOLE ANTENNA FOR A MOBILE COMMUNICATIONS DEVICE**

(75) Inventors: **Alfonso Sanz**, Barcelona (ES); **Carles Puente Baliarda**, Barcelona (ES)

(73) Assignee: **Fractus, S.A.**, Barcelona (ES)

Reexamination Request:
No. 95/000,590, Oct. 1, 2010
No. 95/001,462, Dec. 16, 2010

Reexamination Certificate for:

Patent No.:	**7,411,556**
Issued:	**Aug. 12, 2008**
Appl. No.:	**11/124,768**
Filed:	**May 9, 2005**

Related U.S. Application Data

(63) Continuation of application No. PCT/EP02/14706, filed on Dec. 22, 2002.

(51) **Int. Cl.**
H01Q 1/24 (2006.01)

(52) **U.S. Cl.** ..... **343/702**; 343/700 MS; 343/895

(58) **Field of Classification Search** 343/702
See application file for complete search history.

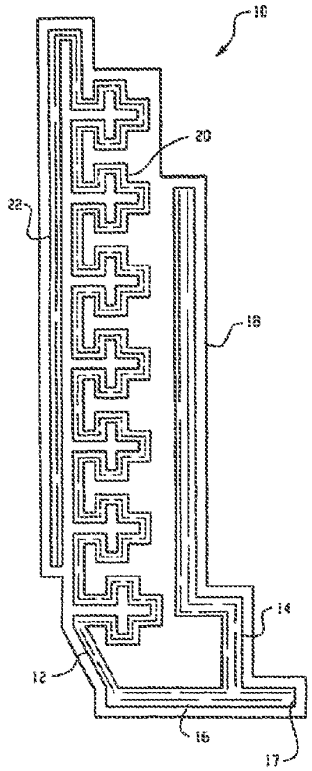
(56) **References Cited**

To view the complete listing of prior art documents cited during the proceedings for Reexamination Control Numbers 95/000,590 and 95/001,462, please refer to the USPTO's public Patent Application Information Retrieval (PAIR) system under the Display References tab.

Primary Examiner—James Menefee

(57) **ABSTRACT**

A multi-band monopole antenna for a mobile communications device includes a common conductor coupled to both a first radiating arm and a second radiating arm. The common conductor includes a feeding port for coupling the antenna to communications circuitry in a mobile communications device. In one embodiment, the first radiating arm includes a space-filling curve. In another embodiment, the first radiating arm includes a meandering section extending from the common conductor in a first direction and a contiguous extended section extending from the meandering section in a second direction.



INTER PARTES REEXAMINATION CERTIFICATE ISSUED UNDER 35 U.S.C. 316

THE PATENT IS HEREBY AMENDED AS INDICATED BELOW.

AS A RESULT OF REEXAMINATION, IT HAS BEEN DETERMINED THAT.

Claims **36-41** and **43** are cancelled.

Claims **1-35**, **42** and **44** were not reexamined.

* * * * *

Electronic Acknowledgement Receipt

EFS ID:	14662581
Application Number:	12228487
International Application Number:	
Confirmation Number:	6222
Title of Invention:	MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES
First Named Inventor/Applicant Name:	Jaume Anguera Pros
Customer Number:	61060
Filer:	Ross Robinson/Brenda Brown
Filer Authorized By:	Ross Robinson
Attorney Docket Number:	47005-P018WUSC1
Receipt Date:	10-JAN-2013
Filing Date:	13-AUG-2008
Time Stamp:	11:44:39
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		IDS_47005_P018WUSC1_1.PDF	55871 1be6ef6bcc60e6abba46f76b4d88c3226a8f4293	yes	4

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Transmittal Letter	1	2
	Information Disclosure Statement (IDS) Form (SB08)	3	4

Warnings:					
Information:					
2	Non Patent Literature	USA95001462_US95000590_Inter_partes_reexamination_certificate_for_US7411556_2.pdf	144354 af415e5c83d8bb6c7b7cf2ef1bf4d21731472831	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	200225		

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Dated: January 10, 2013
Electronic Signature for Brenda I. Brown: /Brenda I. Brown/

Docket No.: 47005-P018WUSC1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jaume Anguera Pros et al.

Application No.: 12/228,487 | Confirmation No.: 6222

Filed: August 13, 2008 | Art Unit: 2821

For: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES | Examiner: H. V. Nguyen

INFORMATION DISCLOSURE STATEMENT (IDS)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Madam:

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The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 23-2426, under Order No. 47005-P018WUSC1.

Dated: January 10, 2013

Respectfully submitted,

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Shoaib A. Mithani
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WINSTEAD PC
P.O. Box 131851
Dallas, Texas 75313
(214) 745-5400
Attorneys For Applicant

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)
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	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS						
Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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U.S.PATENT APPLICATION PUBLICATIONS						
Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐
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NON-PATENT LITERATURE DOCUMENTS			
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	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	1	US13/556626 - Office action dated November 06, 2012	☐

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EFS ID:	15060401
Application Number:	12228487
International Application Number:	
Confirmation Number:	6222
Title of Invention:	MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES
First Named Inventor/Applicant Name:	Jaume Anguera Pros
Customer Number:	61060
Filer:	Ross Robinson/Brenda Brown
Filer Authorized By:	Ross Robinson
Attorney Docket Number:	47005-P018WUSC1
Receipt Date:	27-FEB-2013
Filing Date:	13-AUG-2008
Time Stamp:	09:22:39
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		Information_Disclosure_Statement_1.PDF	55405 9fa778b9653b39a9b14f388baf73c112cde7c8c7	yes	4

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Transmittal Letter	1	2
	Information Disclosure Statement (IDS) Form (SB08)	3	4

Warnings:					
Information:					
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Warnings:					
Information:					
		Total Files Size (in bytes):	14167833		

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Dated: February 27, 2013
Electronic Signature for Brenda I. Brown: /Brenda I. Brown/

Docket No.: 47005-P018WUSC1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
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Application No.: 12/228,487 | Confirmation No.: 6222

Filed: August 13, 2008 | Art Unit: 2821

For: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES | Examiner: H. V. Nguyen

INFORMATION DISCLOSURE STATEMENT (IDS)

MS Amendment
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Alexandria, VA 22313-1450

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Dated: February 27, 2013

Respectfully submitted,

Electronic signature: /Shoaib A. Mithani/
Shoaib A. Mithani
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P.O. Box 131851
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(214) 745-5400
Attorneys For Applicant

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Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

61060 7590 03/25/2013

WINSTEAD PC
P.O. BOX 131851
DALLAS, TX 75313

EXAMINER	
NGUYEN, HOANG V	
ART UNIT	PAPER NUMBER
2821	

DATE MAILED: 03/25/2013

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/228,487	08/13/2008	Jaume Anguera Pros	47005-P018WUSC1	6222

TITLE OF INVENTION: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1780	$300	$0	$2080	06/25/2013

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

61060 7590 03/25/2013
WINSTEAD PC
P.O. BOX 131851
DALLAS, TX 75313

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

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12/228,487	08/13/2008	Jaume Anguera Pros	47005-P018WUSC1	6222

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APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1780	$300	$0	$2080	06/25/2013

EXAMINER	ART UNIT	CLASS-SUBCLASS
NGUYEN, HOANG V	2821	343-7000MS

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:

❑ Issue Fee

❑ Publication Fee (No small entity discount permitted)

❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**

❑ A check is enclosed.

❑ Payment by credit card. Form PTO-2038 is attached.

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29

NOTE: Absent a valid certification of Micro Entity Status (see form PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

❑ Applicant asserting small entity status. See 37 CFR 1.27

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

❑ Applicant changing to regular undiscounted fee status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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Alexandria, Virginia 22313-1450
www.uspto.gov

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61060 7590 03/25/2013

WINSTEAD PC
P.O. BOX 131851
DALLAS, TX 75313

EXAMINER	
NGUYEN, HOANG V	
ART UNIT	PAPER NUMBER
2821	

DATE MAILED: 03/25/2013

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 664 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 664 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No.	Applicant(s)	
	12/228,487	PROS ET AL.	
	Examiner	Art Unit	
	HOANG V. NGUYEN	2821	

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

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *RCE filed on 5/24/2012*.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are *16-60*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov .

4. ☐ 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 the:
      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)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date See Continuation Sheet
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☐ Examiner's Amendment/Comment
6. ☒ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/HOANG V NGUYEN/
Primary Examiner, Art Unit 2821

Continuation of Attachment(s) 2. Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date: 5/24/12; 7/26/12; 10/12/12; 1/10/13; 2/27/13; 12/12/08; 3/30/11.

Allowable Subject Matter

1. Claims 16-60 are allowed.

2. The following is an examiner's statement of reasons for allowance:

Regarding claim 16, none of the prior art of record, either taken alone or in combination, fairly teaches or suggests a mobile communication device comprising, in combination with all other limitations in the claim, a multi-band antenna capable of operating at multiple frequency bands, the multi-band antenna including an antenna element; wherein the antenna element operates in cooperation with the ground plane layer; the antenna element comprising a common conductor; a first radiating arm connected to the common conductor; a second radiating arm connected to the common conductor; wherein the common conductor includes a feeding port, the feeding port being coupled to the feeding point; wherein at least a portion of the first radiating arm and at least a portion of the second radiating arm are arranged on different planes; wherein the first radiating arm is at least partially shaped according to a grid-dimension curve.

Claims 17-29 are allowed for depending on claim 16.

Regarding claim 30, none of the prior art of record, either taken alone or in combination, fairly teaches or suggests a mobile communication device comprising, in combination with all other limitations in the claim, a multi-band antenna capable of operating at multiple frequency bands, the multi-band antenna including an antenna element; wherein the antenna element is coupled to the feeding point and operates in cooperation with the ground plane layer; the antenna element comprising a first conductor, the first conductor comprising a first radiating arm having a grid-dimension section shaped according to a grid-dimension curve; a second conductor

arranged at a predetermined distance from the first conductor and electromagnetically coupled to the first conductor, the second conductor comprising a planar section.

Claims 31-45 are allowed for depending on claim 30.

Regarding claim 46, none of the prior art of record, either taken alone or in combination, fairly teaches or suggests a mobile communication device comprising, in combination with all other limitations in the claim, a multi-band antenna capable of operating at multiple frequency bands, the multi-band antenna including a dielectric mounting structure having a plurality of surfaces; an antenna element, the antenna element being coupled to the feeding point and operating in cooperation with the ground plane layer; wherein the antenna element comprises a first radiating arm arranged on two or more surfaces of the plurality of surfaces of the dielectric mounting structure; the first radiating arm comprising a first section shaped according to a grid-dimension curve; a second section connected to the grid-dimension section, the second section having a width different from a width of the first section; and wherein the printed circuit board, the communication circuitry, and the multi-band antenna are arranged inside the device housing.

Claims 47-60 are allowed for depending on claim 46.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Inquiry

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, Jacob Y. Choi can be reached on (571) 272-2367. 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

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	12228487
Filing Date	2008-08-13
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	Nguyen, Hoang V.
Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
/H.N./	1	20090231215		2009-09-17	TAURA	

If you wish to add additional U.S. Published Application citation information please click the Add button.

FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐

If you wish to add additional Foreign Patent Document citation information please click the Add button

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V.
	Attorney Docket Number	47005-P018WUSC1

/H.N./	1	Carver , K. R. et al., Microstrip antenna technology, in "Microstrip antennas" to D.M. Pozar; IEEE Antennas and Propagation Society, 1995, Pages: 3-26	☐
/H.N./	2	Munson , R. E., Conformal microstrip communication antenna, Symposium on USAF antenna Research and Development, 23th, October 1973	☐
	3		☐
	4		☐

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature	/Hoang Nguyen/	Date Considered	03/01/2013

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

PTO/SB/08a (07-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

MAR 3 0 2011
PATENT & TRADEMARK OFFICE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	Nguyen, Hoang V
Attorney Docket Number	47005-P018WUSC1

FORM 1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5986609		1999-11-16	Spall	
	2	4907011		1990-03-06	Kuo	
	3	7015868		2006-03-21	Puente	
	4	7123208		2006-10-17	Puente	
	5	7202822		2007-04-10	Baliarda	
	6	7312762		2007-12-25	Puente	
	7	7394432		2008-07-01	Baliarda	
	8	7397431		2008-07-08	Baliarda	

If you wish to add additional U.S. Patent citation information please click the Add button.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20040009755		2004-01-15	Yoshida	
	2	20090109101		2009-04-30	Baliarda	

If you wish to add additional U.S. Published Application citation information please click the Add button.

FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	05007109	JP		1993-01-14	Yasuhiro		☐
	2	1258054	EP		2005-08-15	Puente		☐
	3	199735360	WO		1997-09-25	Ball Aerospace & Technologies Corp.		☐

If you wish to add additional Foreign Patent Document citation information please click the Add button

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	Declaration of Jeffery D. Baxter - Including Exhibits regarding US patent 7411556 Defendants 20100730	☐

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	2	Dubost , G. Wideband flat dipole and short-circuit microstrip patch elements and arrays. In Handbook of microstrip antennas - Chapter 7. Peter Peregrinus Ltd. James , J. R. ; Hall , P. S. (ed.) 1989	☐
	3	NA. Nokia 8260 - FCC ID GMLNSW-4DX. April 1999.	☐
	4	Rudge, A. W. The handbook of antenna design. Peter Peregrinus, 1986.	☐
	5	Borja , C. ; Puente , C. Iterative network models to predict the performance of Sierpinski fractal antennas and networks. Antennas and Propagation Society International Symposium, 1999.	☐
	6	Campos, O. Study of multiband and miniature fractal antennas. Universitat Politècnica de Catalunya, 1998	☐
	7	Cristal , E. G. et al. Hairpin-line and hybrid hairpin-line / Half-wave parallel-coupled-line filers. IEEE Transactions on Microwave Theory and Techniques. November, 1972	☐
	8	Hohlfeld , R. G. ; Cohen N. Self-similarity and the geometric requirements for frequency independence in antennae. Fractals, 1999.	☐
	9	Jaggard , D. L. Fractal electrodynamics and modeling. Directions in electromagnetic wave modeling,1991	☐
	10	Lee , B. T. Office action for the US patent application 10/181790 dated on August 27, 2004	☐
	11	Lee , B. T. Office action for the US patent application 10/181790 dated on June 2, 2005	☐
	12	Lee , B. T. Response to office action for the US patent application 10/181790 dated on August 27, 2004	☐

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

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	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	13	Lee , B.T. Office action for the US patent application 10/181790 dated on March 2, 2005	☐
	14	Lee , Benny T. Office action for the US patent application 10/181790 dated on August 4, 2005	☐
	15	Maiorana , D. Amendment and response to the Office Action dated on January 23, 2004 of US patent application 10/102568	☐
	16	Mandelbrot, B. The fractal geometry of nature. Freeman and Company. 1983	☐
	17	Matthaei , George L. et al. Hairpin-comb filters for HTS and other narrow-band applications. IEEE Transactions on Microwave Theory and Techniques, August, 1997	☐
	18	Matthaei , George L. Microwave filters impedance-matching networks and coupling structures. Artech House. 1980	☐
	19	Mithani , S. Response to the Office Action dated March 12, 2007 of US patent application no. 11/021597	☐
	20	NA. International preliminary examination report of PCT/EP00/00411. European Patent Office (EPO). August, 2002	☐
	21	NA. Nokia 8290. 2010	☐
	22	NA. Office action for the Chinese patent application 01823716 dated on February 16, 2007	☐
	23	NA. Office action for the Chinese patent application 01823716 dated Setember 21, 2007	☐

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

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	24	NA. Response to the office action dated on February 16, 2007 for the Chinese patent application 01823716	☐
	25	Nguyen , H. Notice of Allowance of US patent application no. 12/347462 dated on May 18, 2009	☐
	26	Nguyen , H. Office Action of US patent application no. 12/347462 dated on October 28, 2009	☐
	27	Nguyen , H. Office Action of US patent application number 10/182635 dated December 13, 2004	☐
	28	Nguyen, H. Notice of Allowance of US patent application no. 11/110052 dated on May 30, 2006	☐
	29	Peitgen , H. ; Jürgens , H. ; Saupe , D. Chaos and Fractals: New frontiers of Science - Pag 8-9 No date available.	☐
	30	Rolan Cisneros, E. International Search Report for the PCT patent application ES99/00296. OEPM. March, 2001	☐
	31	Sauer , J. Amendment and response to office action dated December 13, 2004 of US patent application no. 10/182635	☐
	32	Sauer , J. Amendment and response to office action dated October 04, 2004 of US patent application no. 10/182635	☐
	33	Sauer , J. M. Response to the office action from US patent application 10/181790 dated March 2, 2005	☐
	34	Sauer , J. M. Response to the Office Action mailed on January 26, 2006 and Advisory Action mailed on March 29, 2006 for the US patent application 10/422578	☐

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	35	Sauer, J.M. Response to the office action from US patent application 10/181790 dated June 2, 2005	☐
	36	Soler , J. ; Romeu , J. ; Puente , C. Mod-P Sierpinski fractal multiband antenna. Antennas and Propagation Society International Symposium, 2000	☐
	37	Tinker J. A. Response to the office action dated October 30, 2007 of US patent application no. 11/021597	☐
	38	Wimer , M. C. Office Action for the US patent application 10/422578 dated on August 23, 2007	☐
	39	Wimer , M. C. Office Action for the US patent application 10/422578 dated on January 26, 2006	☐
	40	Wimer , M. C. Office Action for the US patent application 10/422578 dated on March 12, 2007	☐
	41	Wimer , M. C. Office action for the US patent application 10/422578 dated on March 26, 2008	☐
	42	Wimer , M. C. Office Action for the US patent application 11/021597 dated on March 12, 2007	☐
	43	Wimer , M. C. Office Action for US Patent Application No 10/422578 dated on June 23, 2005	☐
	44	Wimer , M. Office action of US patent application no. 11/021597 dated October 30, 2007	☐
	45	Zhang , Dawei ; Liang , G.C. ; Shih , C.F. Narrowband lumped element microstrip filters using capacitively loaded inductors. Microwave Symposium Digest, 1995	☐

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	46	Defendants LG Electronics Mobilecomm USA., Inc.'s answer and counterclaim to complaint. LG Electronics Mobilecomm USA., Inc. January 10 2010	☐
	47	Defendant Pantech Wireless, INC.'S answer, affirmative defenses and counterclaims to Fractus SA' s Amended complaint. Pantech Wireless, Inc. June 4 2009	☐
	48	Defendant UTStarcom, Inc.'s answer, affirmative defenses, and counterclaims to plaintiff's amended complaint. UTStarcom, Inc. June 8 2009	☐
	49	Answer, affirmative defenses and counterclaims to the amended complaint for patent infringement on behalf of Defendant Personal Communications Devices Holdings, LLC. July 20, 2009	☐
	50	Defendant Sanyo North America Corporation's partial answer to amended complaint for patent infringement. Sanyo North America Corporation. July 20, 2009	☐

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	1	Kyocera Communications Inc's answer, affirmative defenses and counterclaims to plantiff's amended complaint. Kyocera Communications Inc. July 21, 2009	☐
	2	Kyocera Wireless Corp's answer, affirmative defenses and counterclaims to plantiff's amended complaint. Kyocera Wireless Corp. July 21, 2009	☐
	3	Palm Inc.'s answer, affirmative defenses and counterclaims to plaintiff's amended complaint. Palm Inc. July 21, 2009	☐
	4	Defendant HTC Corporation's answer and counterclaim to plaintiff's amended complaint. HTC Corporation. September 25, 2009	☐
	5	Defendant HTC America Inc's answer and counterclaim to plaintiff's amended complaint. HTC America Inc. September 25, 2009	☐
	6	Defendants Samsung Electronics Co., Ltd.'s; Samsung Electronics Research Institute's and Samsung Semiconductor Europe GMBH' s answer; and Samsung Telecommunications America LLC' s answer and counterclaim to the amended complaint of plaintiff Fractus, SA. October 1, 2009	☐
	7	Defendants Research in Motion LTD, and Research in Motion Corporation's answers, defenses and counterclaims to plaintiff's amended complaint. October 1, 2009	☐
	8	Defendants LG Electronics Inc., LG Electronics USA, Inc., and LG Electronics Mobilecomm USA Inc. answer and counterclaim to amended complaint. October 1, 2009	☐
	9	Defendants HTC America, Inc's first amended answer and counterclaims to plaintiff's amended complaint. October 2, 2009	☐
	10	Defendants Research in Motion LTD, and Research in Motion Corporation's amended answer, defenses and counterclaims to plaintiff's amended complaint. November 24, 2009	☐
	11	Answer, affirmative defenses and counterclaims to the second amended complaint for patent infringement on behalf of Defendant Personal Communications Devices Holdings, LLC. December 17, 2009	☐

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	12	Defendant HTC America, Inc's answer and counterclaims to plaintiff's second amended complaint. December 21, 2009	☐
	13	Defendant HTC Corporation's answer and counterclaims to plaintiff's second amended complaint. December 21, 2009	☐
	14	Defendant Research in Motion LTD and Research in Motion Corporation's second answer, defenses and counterclaims to plaintiff's second amended complaint. December 21, 2009	☐
	15	Defendant Pantech Wireless, Inc's answer, affirmative defenses and counterclaims to Fractus SA's second amended complaint. December 21, 2009	☐
	16	Defendant Sanyo Electric Co. LTD's answer to second amended complaint for patent infringement. December 22, 2009	☐
	17	Defendant Sanyo North America Corporation's answer to second amended complaint for patent infringement. December 22, 2009	☐
	18	Defendant UTStarcom, Inc's answer, affirmative defenses and counterclaims to Fractus SA's second amended complaint. December 22, 2009	☐
	19	Palm, Inc's answer, affirmative defenses and counterclaims to paintiff's second amended complaint. December 22, 2009	☐
	20	Kyocera Communications Inc's answer, affirmative defenses and counterclaims to paintiff's second amended complaint December 22, 2009	☐
	21	Kyocera Wireless Corp's answer, affirmative defenses and counterclaims to paintiff's second amended complaint December 22, 2009	☐
	22	Defendants Samsung Electronics Co., Ltd.'s; Samsung Electronics Research Institute's and Samsung Semiconductor Europe GMBH' s answer; and Samsung Telecommunications America LLC' s answer and counterclaim to the second amended complaint of plaintiff Fractus, SA. December 23, 2009	☐

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	Attorney Docket Number	47005-P018WUSC1

	23	Defendants LG Electronics Inc., LG Electronics USA, Inc., and LG Electronics Mobilecomm USA Inc. answer and counterclaim to second amended complaint. December 28, 2009	☐
	24	Answer of the Sharp Defendants to plaintiff's second amended complaint. December 29, 2009	☐
	25	Amended answer of the Sharp defendants to plaintiff's second amended complaint. February 24, 2010	☐
	26	Defendants Samsung Electronics Co., Ltd.'s; Samsung Electronics Research Institute's and Samsung Semiconductor Europe GMBH' s first amended answer; and Samsung Telecommunications America LLC' s first amended answer and counterclaim to the second amended complaint of plaintiff Fractus, SA. February 24, 2010	☐
	27	Defendants LG Electronics Inc., LG Electronics USA, Inc., and LG Electronics Mobilecomm USA Inc. First amended answer and counterclaim to second amended complaint. January 24, 2010	☐
	28	Defendant HTC America, Inc.'s amended answer and counterclaim to plaintiff's second amended complaint. February 24, 2010	☐
	29	Defendant HTC Corporation's amended answer and counterclaim to plaintiff's second amended complaint. February 24, 2010	☐
	30	Defendant HTC Corporation's amended answer and counterclaim to plaintiff's second amended complaint. February 25, 2010	☐
	31	Defendant HTC America, Inc.'s amended answer and counterclaim to plaintiff's second amended complaint. February 25, 2010	☐
	32	Fractus's answer to defendant Pantech Wireless Inc. in the case of Fractus SA vs. Samsung Electronics cp. 24, June 2009	☐
	33	Fractus's answer to defendant UT Starcom, Inc. counterclaims. in the case of Fractus SA vs. Samsung Electronics cp. 29, June 2009	☐

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	34	Complaint for patent infringement - Case 6:09-cv-00203. Fractus. May 5, 2009	☐
	35	Civil cover sheet - Case 6:09-cv-00203. Fractus. May 5, 2009	☐
	36	Amended complaint for patent infringement - Case 6:09-cv-00203. May 6, 2009	☐
	37	Second amended complaint for patent infringement - Case 6:09-cv-00203. December 2, 2009	☐
	38	Second amended complaint for patent infringement - Case 6:09-cv-00203. December 8, 2009	☐
	39	Plaintiff Fractus, S. A.'s answer to defendant personal communications devices holdings, LLC's counterclaims to the Second Amended Complaint - Case 6:09-cv-00203. January 4, 2010	☐
	40	Plaintiff Fractus, S. A.'s answer to the counterclaims of defendants Research in Motion LTD. and Research in Motion Corporation to the Second Amended Complaint - Case 6:09-cv-00203. January 4, 2010	☐
	41	Plaintiff Fractus, S. A.'s answer to counterclaims of defendant Pantech Wireless, Inc. to the Second Amended Complaint - Case 6:09-cv-00203. January 4, 2010	☐
	42	Plaintiff Fractus, S. A.'s answer to counterclaims of defendant Kyocera Communications, Inc's Counterclaims to the Second Amended Complaint - Case 6:09-cv-00203. January 4, 2010	☐
	43	Plaintiff Fractus, S. A.'s answer to defendant Kyocera Wireless Corp's Counterclaims to the Second Amended Complaint - Case 6:09-cv-00203. January 4, 2010	☐
	44	Plaintiff Fractus, S. A.'s answer to defendant Palm, Inc's Counterclaims to the Second Amended Complaint - Case 6:09-cv-00203. January 4, 2010	☐

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	45	Plaintiff Fractus, S. A.'s answer to defendant UTStarcom, Inc's Counterclaims to the Second Amended Complaint - Case 6:09-cv-00203. January 4, 2010	☐
	46	Plaintiff Fractus, S. A.'s answer to counterclaims of defendant Samsung Telecommunications America LLC to the Second Amended Complaint - Case 6:09-cv-00203. January 4, 2010	☐
	47	Plaintiff Fractus, S. A.'s answer to counterclaims of defendants LG Electronics Inc., Electronics USA, Inc., and LG Electronics Mobilecomm USA, Inc. to the Second Amended Complaint - Case 6:09-cv-00203. January 4, 2010	☐
	48	Plaintiff Fractus, S. A.'s answer to counterclaims of defendants HTC America, Inc to the Second Amended Complaint - Case 6:09-cv-00203. January 14, 2010	☐
	49	Plaintiff Fractus, S. A.'s answer to amended counterclaims of defendant Samsung Telecommunications america LLC's to Fractus's Second Amended Complaint - Case 6:09-cv-00203. April 1, 2010	☐
	50	Plaintiff Fractus, S. A.'s answer to amended counterclaims of defendant HTC Corporation to Fractus's Second Amended Complaint - Case 6:09-cv-00203. April 1, 2010	☐

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	2	Plaintiff Fractus, S. A.'s answer to amended counterclaims of defendant LG Electronics Inc., LG Electronics USA, Inc., and LG Electronics Mobilecomm USA Inc's to Fractus's Second Amended Complaint - Case 6:09-cv-00203. April 1, 2010	☐
	3	Love , J. D. Memorandum opinion and order. Court 20110120	☐
	4	NA. Defendant's notice of compliance regarding second amended invalidity contentions. Defendants 20110121	☐
	5	NA. Fractus' reply to defendant's motion for reconsideration of, and objections to, magistrate Judge Love's markman order. Fractus 20110204	☐
	6	NA. Declaration of Thomas E. Nelson - Exhibit A - Antenna photos. Defendants 20110203	☐
	7	NA. Report and recommendation of United States magistrate judge. Court 20110208	☐
	8	NA. Order adopting report and recommendation of magistrate judge. Court 20110211	☐
	9	NA. Notice of compliance with motion practice orders. Fractus 20110214	☐
	10	NA. Defendants LG Electronics Inc, LG Electronics USA, and LG Electronics Mobilecomm USA Inc's second amended answer and counterclaim to second amended complaint. Defendants 20110228	☐
	11	NA. Reply brief in support of Defendant's motion for reconsideration of the court's ruling on the term "at least a portion" in the court's December 17, 2010 claim construction order based on newly-available evidence. Defendants 20110225	☐

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	12	NA. Defendants Samsung Electronics Co LTD (et al) second amended answer and counterclaims to the second amended complaint of plaintiff Fractus SA. Defendants 20110228	☐
	13	NA. Defendant Pantech Wireless Inc amended answer, affirmative defenses, and counterclaims to Fractus' second amended complaint. Defendants 20110228	☐
	14	LITIGATION - Invalidity Contentions - Defendants Defendants Invalidity contentions including apendix and exhibits refering Multiband Monopole. Defendants 20100208	☐
	15	Infringement Chart - Kyocera MARBL. Patent: 7411556 Fractus 20091105	☐
	16	Infringement Chart - Kyocera S2400. Patent: 7411556 Fractus 20091105	☐
	17	Infringement Chart - Kyocera NEO E1100. Patent: 7411556 Fractus 20091105	☐
	18	Infringement Chart - LG Shine CU720. Patent: 7411556 Fractus 20091105	☐
	19	Infringement Chart - LG Rumor. Patent: 7411556 Fractus 20091105	☐
	20	Infringement Chart - LG Voyager VX10000. Patent: 7411556 Fractus 20091105	☐
	21	Infringement Chart - LG VX8350. Patent: 7411556 Fractus 20091105	☐
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	25	Infringement Chart - LG AX8600. Patent: 7411556 Fractus 20091105	☐
	26	Infringement Chart - LG Flare LX165. Patent: 7411556 Fractus 20091105	☐
	27	Infringement Chart - LG Aloha LX140. Patent: 7411556 Fractus 20091105	☐
	28	Infringement Chart - LG Chocolate VX8550. Patent: 7411556 Fractus 20091105	☐
	29	Infringement Chart - LG Muziq LX570. Patent: 7411556 Fractus 20091105	☐
	30	Infringement Chart - LG VX9400. Patent: 7411556 Fractus 20091105	☐
	31	Infringement Chart - LG VX8560 Chocolate 3. Patent: 7411556 Fractus 20091105	☐
	32	Infringement Chart - LG EnV3 VX9200. Patent: 7411556 Fractus 20091105	☐
	33	Infringement Chart - LG Lotus. Patent: 7411556 Fractus 20091105	☐

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	Attorney Docket Number	47005-P018WUSC1

	34	Infringement Chart - LG AX155. Patent: 7411556 Fractus 20091105	☐
	35	Infringement Chart - LG enV Touch VX1100. Patent: 7411556 Fractus 20091105	☐
	36	Infringement Chart - LG AX380. Patent: 7411556 Fractus 20091105	☐
	37	Infringement Chart - LG VX8360. Patent: 7411556 Fractus 20091105	☐
	38	Infringement Chart - Pantech Breeze C520. Patent: 7411556 Fractus 20091105	☐
	39	Infringement Chart - Patench DUO C810. Patent: 7411556 Fractus 20091105	☐
	40	Infringement Chart - Blackberry 8110. Patent: 7411556 Fractus 20091105	☐
	41	Infringement Chart - Blackberry 8120. Patent: 7411556 Fractus 20091105	☐
	42	Infringement Chart - Blackberry 8310. Patent: 7411556 Fractus 20091105	☐
	43	Infringement Chart - Blackberry 8330. Patent: 7411556 Fractus 20091105	☐
	44	Infringement Chart - Blackberry 8130. Patent: 7411556 Fractus 20091105	☐

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	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	45	Infringement Chart - Blackberry 8320. Patent: 7411556 Fractus 20091105	☐
	46	Infringement Chart - Blackberry 8220. Patent: 7411556 Fractus 20091105	☐
	47	Infringement Chart - Blackberry 8100. Patent: 7411556 Fractus 20091105	☐
	48	Infringement Chart - Blackberry 8820. Patent: 7411556 Fractus 20091105	☐
	49	Infringement Chart - Blackberry 8830. Patent: 7411556 Fractus 20091105	☐
	50	Infringement Chart - Samsung SCH-R500. Patent: 7411556 Fractus 20091105	☐

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FORM 4

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7095372		2006-08-22	Soler	
	2	7463199		2008-12-09	Soler	

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U.S.PATENT APPLICATION PUBLICATIONS

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FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T5
	1	Infringement Chart - Samsung M320. Patent: 7411556 Fractus 20091105	☐
	2	Infringement Chart - Samsung SCH U340. Patent: 7411556 Fractus 20091105	☐
	3	Infringement Chart - Samsung SCH U410. Patent: 7411556 Fractus 20091105	☐
	4	Infringement Chart - Samsung SCH-R430. Patent: 7411556 Fractus 20091105	☐
	5	Infringement Chart - Samsung SCH U700. Patent: 7411556 Fractus 20091105	☐
	6	Infringement Chart - Samsung SCH-U940. Patent: 7411556 Fractus 20091105	☐
	7	Infringement Chart - Samsung SGH A117. Patent: 7411556 Fractus 20091105	☐
	8	Infringement Chart - Samsung SCH A127. Patent: 7411556 Fractus 20091105	☐
	9	Infringement Chart - Samsung SGH T229. Patent: 7411556 Fractus 20091105	☐
	10	Infringement Chart - Samsung SGH T439. Patent: 7411556 Fractus 20091105	☐

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	11	Infringement Chart - Samsung SGH T919. Patent: 7411556 Fractus 20091105	☐
	12	Infringement Chart - Samsung SGH-A437. Patent: 7411556 Fractus 20091105	☐
	13	Infringement Chart - Samsung SGH A867. Patent: 7411556 Fractus 20091105	☐
	14	Infringement Chart - Samsung SCH-U310. Patent: 7411556 Fractus 20091105	☐
	15	Infringement Chart - Samsung SGH-A237. Patent: 7411556 Fractus 20091105	☐
	16	Infringement Chart - Samsung SGH-T639. Patent: 7411556 Fractus 20091105	☐
	17	Infringement Chart - Samsung SGH-A837. Patent: 7411556 Fractus 20091105	☐
	18	Infringement Chart - Samsung SCH-R600. Patent: 7411556 Fractus 20091105	☐
	19	Infringement Chart - Samsung SCH-U520. Patent: 7411556 Fractus 20091105	☐
	20	Infringement Chart - Samsung SCH-U750. Patent: 7411556 Fractus 20091105	☐
	21	Infringement Chart - Samsung SGH-T219. Patent: 7411556 Fractus 20091105	☐

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	22	Infringement Chart - Samsung SGH-T929. Patent: 7411556 Fractus 20091105	☐
	23	Infringement Chart - Samsung SCH-A645. Patent: 7411556 Fractus 20091105	☐
	24	Infringement Chart - Samsung FlipShot SCH-U900. Patent: 7411556 Fractus 20091105	☐
	25	Infringement Chart - Samsung SGH-A257. Patent: 7411556 Fractus 20091105	☐
	26	Infringement Chart - Samsung SGH-T559. Patent: 7411556 Fractus 20091105	☐
	27	Infringement Chart - Samsung SPH-M550. Patent: 7411556 Fractus 20091105	☐
	28	Infringement Chart - Sanyo Katanna II. Patent: 7411556 Fractus 20091105	☐
	29	Infringement Chart - Sanyo Katana LX. Patent: 7411556 Fractus 20091105	☐
	30	Infringement Chart - Sharp Sidekick LX. Patent: 7411556 Fractus 20091105	☐
	31	Infringement Chart - UTStarcom CDM7126. Patent: 7411556 Fractus 20091105	☐
	32	Defendant's reply in suport of their motion for summary judgment of invalidity based on indefiniteness and lack of written description for certain terms Defendants 20100830	☐

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	Attorney Docket Number	47005-P018WUSC1

	33	NA. Expert declaration by Dr. D. Jaggard including exhibits (curriculum and datasheets from Cushcraft, Antenova, Ethertronics and Taoglas) Fractus 20100816	☐
	34	NA. Fractus's opposition to defendants' motion for summary judgement of invalidity based on indefiniteness and lack of written description for certain terms Fractus 20100816	☐
	35	Howe , M. Declaration of Micah Howe in support of Fractus SA opposition to defendants' motion for summary judgement of invalidity based on indefiniteness and lack of written description for certain terms Heim , Payne and Chorus LLP 20100816	☐
	36	NA. IEEE Standard Dictionary of Electrical and Electronics. Terms IEEE Press (6th ed.) pages 359, 688, and 878 19960101	☐
	37	Werner , D. H and Mittra , R. Frontiers in electromagnetics. IEEE Press. pages 5-7 20000101	☐
	38	Nelson , Thomas R. ; Jaggard , Dwight L. Fractals in the Imaging Sciences J. Optical Society AM. 19990101	☐
	39	Stutzman , W. ; Thiele , G. Antenna theory and design. John Wiley and Sons. Pags. 18, 36 19810101	☐
	40	Jaggard , D. Diffraction by Bandlimited Fractal Screens. Optical Society AM 19870601	☐
	41	Feder, J. Fractals. Plenum Press. pages 10-11, 15-17, and 25 19880101	☐
	42	Fleishmann , M. ; Tildesley , DJ ; Balls , RC. Fractals in the natural sciences. Royal Society of London 19990101	☐
	43	Kritikos , H.N. ; Jaggard , D.L. Recent advances in electromagnetic theory - Chapter 6 On fractal electrodynamics. Springer - Verlag. Chapter 6 19901001	☐

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

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	44	Caswell , W. E. Invisible errors in dimensions calculations: geometric and systematic effects Dimensions and Entropies in Chaotic Systems 19860101	☐
	45	NA. European Patent Convention - Article 123 European Patent Office 20000101	☐
	46	Kyriacos , S. ; Buczkowski , S. et al. A modified box-counting method Fractals - World Scientific Publishing Company 19940101	☐
	47	Carpintero , F. Reply to the Written Opinion for the PCT patent application ES99/00296 dated on November 15, 2001 Herrero & Asociados 20011115	☐
	48	Werner , D. H. et al. Frontiers in Electromagnetics - Chapter 3 - The Theory and design of fractal antenna arrays IEEE Press Series 20000101	☐
	49	Balanis, Constantine A. Antenna theory - Analysis and design - Chapter 2 - Fundamental parameters of antennas John Wiley & Sons 19820101	☐
	50	Sauer , J. M. Preliminary amendment for the US patent application 10/963080 Jones Day. Case 6:09-cv-00203-LED-JDL 20041210	☐

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EXAMINER SIGNATURE

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FORM 5

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7342553		2008-03-11	SOLER	

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	1	NA. Merriam-Webster's Collegiate Dictionary (1993) Merriam-Webster's. Case 6:09-cv-00203-LED-JDL 19930101	☐
	2	Chen , Z. N. Broadband probe-fed L-shaped plate antenna Microwave and Optical Technology Letters 20000805	☐
	3	NA. American Heritage College Dictionary (1997). Pags 340 and 1016 Mifflin Comp. Case 6:09-cv-00203-LED-JDL 19970101	☐
	4	Buczkowski , Stéphane ; Kyriacos. The modified box-countig method: analysis of some characteristic paramenters. Pattern Recognition 19980420	☐
	5	Wolin , H. A. Preliminary Amendment of U.S. Application 10/102568 Rosenman & Colin LLP 20020312	☐
	6	Menefee , J. Office Action for the US patent reexamination 95/001390 dated Aug. 12, 2010 USPTO 20100812	☐
	7	Menefee , James. Office Action for the US patent reexamination 95/001389 dated on August 12, 2010 USPTO 20100812	☐
	8	Phan , T. Office Action for US Patent Application No 10/102568 dated on January 23, 2004 USPTO 20040123	☐
	9	Fractus vs. Samsung et al. Claim construction and motion for summary judgement - Markman Hearing - [Defendants] Defendants 20100902	☐
	10	Fractus' Claim Construction Presentation - Markman Hearing - Fractus v. Samsung et al. 609-cv-00203 September 2,2010 20100902	☐
	11	Love , J. Memorandum order and opinion. Court 20101217	☐

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	12	Gianvittorio , John Paul et al. Fractal antennas - a novel antenna miniturization technique and applications Antennas and Propagation Magazine, IEEE 20020201	☐
	13	Best , Steven R. The fractal loop antenna: a comparison of fractal and non-fractal geometries Antennas and Propagation Society International Symposium, 2001. IEEE 20010101	☐
	14	Romeu , J. et al. Fractal FSS - A novel dual-band frequency selective surface Antennas and Propagation, IEEE Transactions on 20000701	☐
	15	Fanjul , J. International Preliminary Examination Report for application no. PCT/ES99/00296 EPO 20011219	☐
	16	NA. Fractus ´s Objections to claim construction memorandum and order. Case 6:09-cv-00203. Fractus 20110114	☐
	17	Puente , C. ; Romeu , J. ; Cardama , A. Fractal-shaped antennas Frontiers in electromagnetics - IEEE Press 20000101	☐
	18	Love , J. Court Order. Provisional claim construction and motion for summary judgement. Provisional markman order. Court 20101109	☐
	19	Jaggard , D. L. Rebuttal expert report of Dr. Dwight L. Jaggard (redacted version) Fractus 20110216	☐
	20	Long , S. A. Rebuttal expert report of Dr. Stuart A. Long (redacted version) Fractus 20110216	☐
	21	Stutzman , W. L. Rebuttal expert report of Dr. Warren L. Stutzman (redacted version) Fractus 20110216	☐
	22	Borowski , E. J. Dictionary of Mathematics Collins - Case 6:09-cv-00203-LED-JDL 19890101	☐

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

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	23	Mehaute, A. Fractal Geometrics CRC Press - Case 6:09-cv-00203-LED-JDL 19900101	☐
	24	NA. Defendants RIM, Samsung, HTC, LG and Pantech's response to plantiff Fractus SA's opening claim construction brief in "Case 6:09-cv-00203-LED-JDL Defendants 20100730	☐
	25	NA. Defendants RIM, Samsung, HTC, LG and Pantech's response to plantiff Fractus SA's opening claim construction brief in "Case 6:09-cv-00203-LED-JDL - Exhibit 41 - Demonstrative re: counting segments Defendants 20100730	☐
	26	NA. Defendants RIM, Samsung, HTC, LG and Pantech's response to plantiff Fractus SA's opening claim construction brief in "Case 6:09-cv-00203-LED-JDL - Exhibit 42 - Demonstrative showing how straight segments can be fitted over a curved surface Defendants 20100730	☐
	27	NA. Defendants RIM, Samsung, HTC, LG and Pantech's response to plantiff Fractus SA's opening claim construction brief in "Case 6:09-cv-00203-LED-JDL" - Exhibit 1 - Chart of Agreed Terms and Disputed Terms Defendants 20100730	☐
	28	NA. Defendants RIM, Samsung, HTC, LG and Pantech's response to plantiff Fractus SA's opening claim construction brief in "Case 6:09-cv-00203-LED-JDL" - Exhibit 2 - Family Tree of Asserted Patents Defendants 20100730	☐
	29	NA. Response of defendants Kyocera Communications, Inc; Palm Inc. and UTStarcom, Inc. to plantiff Fractus SA's opening claim construction brief in "Case 6:09-cv-00203-LED-JDL" Defendants 20100730	☐
	30	NA. Claims for the EP patent 00909089. Herrero y Asociados 20050128	☐
	31	NA. The American Heritage College Dictionary - pag 684 , 1060 Houghton Mifflin Comp. - 3d ed. - Case 6:09-cv-00203-LED-JDL 19970101	☐
	32	NA. The American Heritage Dictionary of the English Language Houghton Mifflin Company - 4th ed.- Case 6:09-cv-00203-LED-JDL 20000101	☐
	33	Walker , B. D. Response office action for the US patent application 11/179250 Howison & Arnott - Case 6:09-cv-00203-LED-JDL 20050712	☐

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	34	Walker , B. Preliminary amendment for the US patent application 11/780932 dated on July 20, 2007 Howison & Arnott - Case 6:09-cv-00203-LED-JDL 20070720	☐
	35	Theiler , J. Estimating fractal dimension J. Opt. Soc. Am. A. Case 6:09-cv-00203-LED-JDL 19900601	☐
	36	Moore , S. Response to Office Action dated February 7, 2006 of US patent application no. 11/033788 Jenkens & Gilchrist 20060601	☐
	37	Stutzman , W. L. ; Thiele , G. A. Antenna theory and design John Wiley and Sons. Pages 8-9 , 43-48 , 210-219 19980101	☐
	38	Rich , Barnett. Review of Elementary Mathematics 2d ed.1997 McGraw - Hill - Case 6:09-cv-00203-LED-JDL 19970101	☐
	39	Sclater , N. ; Markus , J. McGraw-Hill Electronics Dictionary McGraw - Hill 19970101	☐
	40	Johnson , R. Antenna engineering handbook (3rd. edition) - Pages 14-1 - 14-5 McGraw-Hill 19930101	☐
	41	Dictionary of Scientific & Technical Terms (6th Ed., 2002) pag 1489 McGraw-Hill 20020101	☐
	42	Parker , S. McGraw-Hill Dictionary of Scientific and Technical Terms (5th ed. 1994) McGraw-Hill - Case 6:09-cv-00203-LED-JDL 19940101	☐
	43	NA. The American Heritage Dictionary - pag 817 , 961 Morris - William - (Second College edition) - Case 6:09-cv-00203-LED-JDL 19820101	☐
	44	Henderson West , B. The Prentice-Hall encyclopedia of mathematics Prentice-Hall 19820101	☐

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	45	West , B.H. et al. The Prentice-Hall Encyclopedia of Mathematics (1982) Prentice-Hall - Case 6:09-cv-00203-LED-JDL 19820101	☐
	46	NA. IEEE Standard Definitions of Terms for Antennas, IEEE Std. 145-1993 (1993) The Institute of Electrical and Electronics Engineers - Case 6:09-cv-00203-LED-JDL 19930318	☐
	47	Borja , C. Antenas fractales microstrip Universitat Politècnica de Catalunya 19970701	☐
	48	Phan , T. Notice of allowance of US patent application No. 10/963080 dated September 1, 2005. USPTO 20050901	☐
	49	Phan , T. Notice of allowance of US patent application No. 11/102390 dated July 6, 2006. USPTO 20060706	☐
	50	Phan , T. Notice of allowance of US patent application No. 11/179257 dated October 19, 2006 USPTO 20061019	☐

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FORM 6

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	1	7528782		2009-05-05	Baliarda	

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FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	00/36700	WO		2000-06-22	Ying		☐

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NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487 12228487 - GAU: 2821
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	1	Phan , T. Office Action for US Patent Application No 11/550256 dated on January 15, 2008 USPTO 20080115	☐
	2	Wimer , M. Notice of allowance of US patent application no. 10/822933 dated on October 18, 2007 USPTO 20071018	☐
	3	Collier , C. P. Geometry for teachers Waveland Press, Inc. 19840101	☐
	4	Mandelbrot , B. B. Opinions (Benoit B. Mandelbrot) World Scientific Publishing Company - Case 6:09-cv-00203-LED-JDL 19930101	☐
	5	Werner , D. H. ; Werner , P. L. ; Ferrare , A. J. Frequency independent features of self-similar fractal antennas Antennas and Propagation Society International Symposium, 1996. AP-S. Digest 19960721	☐
	6	Foroutan-pour , K. ; Dutilleul , P. ; Smith , D.L. Advances in the implementation of the box-counting method of fractal dimension estimation Applied Mathematics and Computation ; Elsevier 19990501	☐
	7	Graf, R. Modern dictionary of electronics Butterworth-Heinemann (6th Ed.) 19840101	☐
	8	NA. Collins Dictionary - Pag608. Collins 19790101	☐
	9	NA. Int'l Electro-Technical Commission IEV No. 712-01-04 - Electropedia : the world's online electrotechnical vocabulary Electropedia - Commission Electrotechnique Internationale - http://www.electropedia.org 19980401	☐
	10	NA. Webster's New Collegiate Dictionary G & C Merriam Co. 19810101	☐
	11	NA. IEEE Standard dictionary of electrical and electronics terms IEEE Standard (6th ed.) 19960101	☐

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

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	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	12	Sawaya , K. ; Ishizone , T. ; Mushiake , Y. A simplified Expression of Dyadic Green's Function for a Conduction Half Sheet Vol. AP-29, No. 5 (Sept. 1981) IEEE TRANSACTIONS ON ANTENNAS & PROPAGATION 19810901	☐
	13	Pozar , D. ; Newman , E. Analysis of a Monopole Mounted near or at the Edge of a Half-Plane IEEE Transactions on Antennas and Propagation 19810501	☐
	14	Johnson, R. Antenna engineering handbook - Pages 4-26 - 4-33 Mc Graw Hill - (3rd Ed.) 19930101	☐
	15	NA. The American Heritage Dictionary - pag 311 , 1208 New College ed. (2nd ed.) 19820101	☐
	16	NA. The American Century Dictionary Oxford University Press 19950101	☐
	17	Rademacher , H. ; Toeplitz , O. The Enjoyment of Math Princeton Science Library 19570101	☐
	18	NA. The Random House Dictionary Random House 19840101	☐
	19	Pressley, A. Elementary Differential Geometry Springer 20000101	☐
	20	Peitgen & D. Saupe, H. The science of fractal images Springer-Verlag 19880101	☐
	21	Peitgen et al, H O. Chaos and fractals : new frontiers of science. Pags. 22-26, 62-66, 94-105, 212-219, 229-243 Springer-Verlag 19920101	☐
	22	Nguyen , H. Notice of Allowance of US patent application no. 10/182635 dated on April 4, 2005 USPTO 20050411	☐

EFS Web 2.1.17

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

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	Attorney Docket Number	47005-P018WUSC1

	23	Request for Inter partes reexamination of US patent no. 7411556 - 95/000600 dated on December 3, 2010 - Exhibits HTC 20101203	☐
	24	Request for Inter partes reexamination of US patent no. 7411556 - 95/000590 dated on December 16, 2010 - Exhibits Kyocera 20101216	☐
	25	Request for inter partes reexamination of US patent no. 7411556 - 95/001462 dated on October 1, 2010 - Exhibits Samsung 20101001	☐
	26	Vinoy , K. J. et al. Hilbert curve fractal antenna: a small resonant antenna for VHF/UHF applications. Microwave and Optical Technology Letters. Pag 215-219 20010501	☐
	27	NA. Amendments and Review of CN patent application no. 01823716.9 of OA dated February 16, 2007. Patent and Trademanrk Office, China Council for the Promotion of International Trade Patent and Trademanrk Office, China Council for the Promotion of International Trade 20070821	☐
	28	Feng , Liu. Office Action of CN patent application 018237169 dated February 16, 2007 The State Intelletual Property Office of the People's Republic of China 20070216	☐
	29	NA. Response to Second OA of CN patent application no. 01823716.9 dated September 21, 2007 CCPIT Patent and Trademark Law Office 20071203	☐
	30	Feng , Liu. Second Office Action of CN patent application 018237169 dated September 21, 2007 The State Intellectual Property Office of the People's Republic of China 20070921	☐
	31	NA. FCC - United States table of frequency allocations. 377-538 Federal Communications Commission 19991001	☐
	32	NA. United States Table of Frequency allocations - The Radio Spectrum United States Department of Commerce 19960301	☐
	33	Buczkowski , Stéphane ; Kyriacos , Soula ; Nekka , Fahima ; Cartilier , Louis. The modified box-countig method: analysis of some characteristic paramenters. 411-418(8) Pattern Recognition 19980420	☐

EFS Web 2.1.17 ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

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	34	Kyriacos , S. ; Buczkowski , S. et al. A modified box-counting method. 321-324 Fractals - World Scientific Publishing Company 19940101	☐
	35	Mehaute, A. Fractal Geometrics. 3-35 CRC Press - Case 6:09-cv-00203-LED-JDL 19900101	☐
	36	Barnsley , M. Fractals Eveywhere Academic Press Professional 19930101	☐
	37	Shafer , G. Probability and Finance John Wiley & Sons 20010101	☐
	38	Parron , J. ; Rius , J. ; Romeu , J. Study of the Koch fractal monopole in the frequency domain Fractalcoms 20020530	☐

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EXAMINER SIGNATURE

Examiner Signature	/Hoang Nguyen/	Date Considered	5/19/2011

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[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

12228487 - GAU: 2891

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
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	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

FORM 7

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7675470	B2	2010-03-09	SANZ ET AL.	
	2	7423592	B2	2008-09-09	PROS ET AL.	
	3	6087990		2000-07-11	THILL ET AL.	
	4	6011518		2000-01-04	YAMAGISHI ET AL.	

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20040009755	A1	2004-01-15	YOSHIDA	

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FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]

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	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	1							☐

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NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T5
	1	Bach Andersen , J. et al., On closely coupled dipoles in a random field, Antennas and Wireless Propagation Letters, IEEE, 2006-12-01	☐
	2	Balanis , Constantine A., Antenna Theory - Analysis and design - Chapter 10, Hamilton Printing, 1982-01-01	☐
	3	Bhavsar , Samir A., Fractus S.A. v. Samsung Electronics Co., Ltd. et al., 6:09-cv-00203 and Fractus S.A. v. LG Electronics Mobilecomm U.S.A., Inc. et al., 6-09-cv-00205 disclosure of material information to the USPTO, Baker Botts LLP, 2009-10-28	☐
	4	Rudge , A. W. et al., The handbook of antenna design, IEE Eletromagnetic Waves Series; Peter Peregrinus Ltd.; 2nd ed., 1986-01-01	☐
	5	Sauer , Joseph M., Response to the Office Action dated October 4, 2004 for the US Patent Application No. 10/422578, Jones Day, 2005-01-06	☐
	6	Sauer , Joseph M., Response to the Office Action dated April 7, 2005 for the US Patent Application 10/422578, Jones Day, 2005-05-31	☐
	7	Sauer , Joseph M., Request for Continued Examination for US Patent Application No. 10/422578 with response to the office action dated on April 7, 2005 and the advisory action dated on June 23, 2005, Jones Day, 2005-08-08	☐
	8	Wimer , Michael C., Office Action for US Patent Application No. 10/422578 dated on October 4, 2004, USPTO, 2004-10-04	☐

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	Filing Date	2008-08-13
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	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

	9	Wimer , Michael, Office Action for US Patent Application No 10/422578 dated on April 7, 2005, USPTO, 2005-04-07	☐
	10	Wimer , M. C., Office Action for the US patent application 10/422578 dated on August 24, 2005, USPTO, 2005-08-24	☐
	11	Wimer , Michael C., Advisory Action before the filing of an Appeal Brief for US Patent Application No. 10/422578, USPTO, 2005-06-23	☐
	12	NA, Defendant HTC Corporation's First amended answer and counterclaim to plaintiff's amended complaint, Defendants, 2009-10-02	☐
	13	NA, European Search Report of patent application no. 10180818 dated December 13, 2010, European Patent Office, 2010-12-13	☐

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EXAMINER SIGNATURE

Examiner Signature	/Hoang Nguyen/	Date Considered	5/19/2011

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12228487	PROS ET AL.
	Examiner	Art Unit
	HOANG V NGUYEN	2821

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☒ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	08/23/2010	01/10/2011	05/19/2011	04/12/2012	03/01/2013				
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Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12228487	PROS ET AL.
	Examiner	Art Unit
	HOANG V NGUYEN	2821

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☒ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
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(Based on PTO 08-08 version)

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 8

Complete if Known	
Application Number	12/228,487-Conf. #6222
Filing Date	August 13, 2008
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	Not Yet Assigned
Attorney Docket Number	47005-P018WUSC1

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AA*	US-5,929,825	07-27-1999	Niu et al.	
	AB*	US-6,166,694	12-26-2000	Ying et al.	
	AC*	US-6,111,545	08-29-2000	Saari et al.	
	AD*	US-6,112,102	08-29-2000	Zhinong et al.	
	AE*	US-6,329,962-A1	12-11-2001	Ying et al.	
	AF*	US-20010002823-A1	06-07-2001	YING	
	AG*	US-20020080088-A1	06-27-2002	Boyle	
	AH*	US-20020175866-A1	11-28-2002	Gram	
	AI*	US-6,104,349	08-15-2000	Cohen	
	AJ*	US-6,307,511	10-23-2001	Ying et al.	
	AK*	US-20020000940-A1	01-03-2002	MOREN et al.	
	AL*	US-6,337,663	01-08-2002	Chi-Ming et al.	
	AM*	US-6,664,930-A1	12-16-2003	Wen et al.	
	AN*	US-5,870,066	02-09-1999	Asakura et al.	
	AO*	US-5,963,871	10-05-1999	Zhinong et al.	
	AP*	US-20020190904-A1	12-19-2002	Cohen	
	AQ*	US-20040027295-A1	01-04-2005	Huber et al.	
	AR*	US-20040095289-A1	05-24-2005	Bae et al.	
	AS*	US-6,445,352	09-03-2002	Cohen	
	AT*	US-20020044090-A1	04-18-2002	Bahr et al.	
	AU*	US-6,130,651	10-10-2000	Yanagisawa et al.	
	AV*	US-6,459,413-A1	10-01-2002	Tseng et al.	
	AW*	US-6,864,854-A1	03-08-2005	Dai et al.	
	AX*	US-4,123,756	10-31-1978	Nagata et al.	
	AY*	US-4,389,651	06-21-1983	Tomasky	
	AZ*	US-5,337,065	08-09-1994	Bonnet et al.	
	AA1*	US-5,572,223	11-05-1996	Phillips et al.	
	AB1*	US-5,943,020	08-24-1999	Liebendoerfer et al.	
	AC1*	US-6,271,794	08-07-2001	Geeraert et al.	
	AD1*	US-6,384,790-A1	05-07-2002	Dishart et al.	
	AE1*	US-6,822,611-A1	11-23-2004	Kontogeorgakis et al.	
	AF1*	US-6,337,667	01-08-2002	Ayala et al.	
	AG1*	US-20010050637-A1	12-13-2001	Aoyama et al.	
	AH1*	US-20030210187-A1	06-08-2004	Wong et al.	
	AI1*	US-20070046548	03-01-2007	Pros et al.	
	AJ1*	US-20070152894	07-05-2007	Sanz et al.	
	AK1*	US-6,950,071	09-27-2005	Wen	
	AL1*	US-20040140938	07-22-2004	Kadambi	
	AM1	US-120020149527	10-17-2002	Wen	
	AN1*	US-20040004574	01-08-2004	Wen	
	AO1*	US-7,057,560	06-06-2006	Erkocevic	
	AP1*	US-20040212545	10-28-2004	Li	
	AQ1*	US-7,126,537	10-24-2006	Cohen	
	AR1*	US-4,578,654	03-25-1986	Tait	
	AS1*	US-5,608,417	03-04-1997	de Vall	
	AT1*	US-5,990,849	11-23-1999	Salvail et al.	
	AU1*	US-7,289,072-B2	10-30-2007	Sakurai, Masanori	

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(Based on PTO 08-08 version)

Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	12/228,487-Conf. #6222
				Filing Date	August 13, 2008
				First Named Inventor	Jaume Anguera Pros
(Use as many sheets as necessary)				Art Unit	2821
				Examiner Name	Not Yet Assigned
Sheet	2	of	8	Attorney Docket Number	47005-P018WUSC1

	AV1*	US-6,882,320-B2	04-19-2005	Park et al.	
	AW1*	US-7,081,857-B2	07-25-2006	Kinnunen et al.	
	AX1*	US-2007/0103371-A1	05-10-2007	Kim et al.	
	AY1*	US-2007/0152887	07-05-2007	Castany et al.	
	AZ1*	US-2006/0028380	02-09-2006	Harano, Nobuya	
	AA2*	US-2007/0024508	02-01-2007	Lee, Hyok	
	AB2*	US-2003/0137459	07-24-2003	Kim et al.	
	AC2*	US-2007/0194997	08-23-2007	Nakanishi et al.	
	AD2*	US-2006/0033668	02-16-2006	Ryu	
	AE2*	US-2006/0170610	08-03-2006	Rabinovich et al.	
	AF2*	US-2005/0237244	10-27-2005	Annabi et al.	
	AG2*	US-6,140,975	10-31-2000	Cohen	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3]-Number[4]-Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T[6]
	BA**	JP-2001-217632	08-10-2001	Matsushita Electric Ind. Co. Ltd.		√
	BB**	EP-0 884 796	12-16-1998	Matsushita Electronic Industrial C., Ltd.		
	BC**	EP-0 777 293	07-03-2002	Murata Manufacuring Co., Ltd.		
	BD**	EP-1 091 445	04-11-2001	Matsushita Electric Industrial Co., Ltd.		
	BE**	WO-01/54225	07-26-2001	Fractus, S.A.		
	BF**	WO-01/11721	02-15-2001	Allgon AB		
	BG**	GB-2 361 584	10-24-2001	Motorola Limited		
	BH**	WO-00/77884	12-21-2000	Harada Industries (Europe) Limited		
	BI**	WO-2004/0025778	03-25-2004	Fractus S.A.		
	BJ**	EP-0 986 130	03-15-2000	Siemens AG		
	BK**	EP-1 237 224	09-04-2002	Siemens AG		
	BL**	EP-1 198 027	04-17-2002	The Furukawa Electric Co., Ltd.		
	BM**	WO-01/48861	07-05-2001	Allgon AB		
	BN**	WO-02/35646	05-02-2002	Fractus-Ficosa International, UTE		
	BO**	WO-99/56345	11-04-1999	Intenna Technology AB		
	BP**	WO-96/38881	12-05-1996	Ericsson Inc.		
	BQ**	WO-01/26182	04-12-2001	Smarteq Wireless AB		
	BR**	EP-1367671	12-03-2003	Ngk Spark Plug Co., Ltd.		
	BS	WO-0235652	05-02-2002	ACE Technology		
	BT	WO-2005076409	08-18-2005	Fractus SA		

Examiner Signature	/Hoang Nguyen/	Date Considered	8/23/2010

5306477v.1 47005/P018WUSC1

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	12/228,487-Conf. #6222
				Filing Date	August 13, 2008
				First Named Inventor	Jaume Anguera Pros
(Use as many sheets as necessary)				Art Unit	2821
				Examiner Name	Not Yet Assigned
Sheet	3	of	8	Attorney Docket Number	47005-P018WUSC1

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NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	CA**	C. Puente et al., "Small But Long Koch Fractal Monopole", Electronics Letters, January 8, 1998, vol. 34, no. 1, pages 9-10	
	CB**	Carles Puente Baliarda et al., "The Koch Monopole: A Small Fractal Antenna", IEEE Transactions on Antennas and Propagation, vol. 48, no. 11, November 2000, pages 1773-1781	
	CC**	Nathan Cohen, "Fractal Antenna Applications in Wireless Telecommunications", IEEE, 1997, pages 43-49	
	CD**	C. Puente et al., "Multiband Properties of a Fractal Tree Antenna Generated by Electrochemical Deposition", Electronics Letters, December 5, 1996, vol. 32, no. 25, pages 2298-2299	
	CE	SIM, "An Internal Triple-band antenna for PCS/IMT-2000/Bluetooth Applications", IEEE Antennas and Wireless Propagation Letters, 2004, vol. 3	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7081857	B2	2006-07-25	KINNUNEN ET AL	
	2	6275198	B1	2001-08-14	KENOUN ET AL	
	3	7289072	B2	2007-10-30	SAKURAI	
	4	5943020		1999-08-24	LIEBENDOERFER ET AL	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20070152894	A1	2007-07-05	SANZ ET AL	
	2	20070046578	A1	2007-03-01	PROS ET AL	

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	Application Number	12228487 12228487 - GAU: 2821
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

(5)

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	1011167	EP	A1	2000-06-21	MATSUSHITA ELECTRIC INDUSTRIAL CO.		☐
	2	2004/057701	WO	A1	2004-07-08	FRACTUS		☐
	3	99/67851	WO	A1	1999-12-29	ALLGON AB		☐
	4	00/03451	WO	A1	2000-01-20	MOTECO AB		☐

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99**)	Application Number	12222848
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20030184482	A1	2003-10-02	BETTIN	
	2	20020000940	A1	2002-01-03	MOREN	

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FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	02078123	WO	A1	2002-10-03	TELEFONAKTIEBOLAGET L.M. ERICSSON		☐
	2	0003451	WO	A1	2002-01-20	MATECO AB		☐

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	Application Number	12222848 12228487 - GAU: 2821
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

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	1	COHEN, N. Fractal antenna applications in wireless telecommunications, Professional Program Proceedings, Electronics Industries Forum of New England, May 1997.	☐

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	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6674405	B2	2004-01-06	WANG	
	2	6839040	B2	2005-01-04	HUBER	

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	Application Number	12228487 12228487 - GAU: 2821
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

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	1	Handbook of antennas in wireless communications, CRC Press, 2002	☐

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	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6950071	B2	2005-09-27	WEN	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20040140938	A1	2004-07-22	KADAMBI	
	2	20020149527	A1	2002-10-17	WEN	
	3	20040004574	A1	2004-01-08	WEN	

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	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
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	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

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	1	WONG, Planar antennas for wireless communications, Wiley Interscience, 2003	☐

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	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7057560	B2	2006-06-06	ERKOCEVIC	

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	1	20040212545	A1	2004-10-28	LI	

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	1	0235652	WO	A1	2002-05-02	ACE TECHNOLOGY		☐
	2	2005076409	WO	A1	2005-08-18	FRACTUS		☐

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	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Not Yet Assigned
	Attorney Docket Number	47005-P018WUSC1

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	WONG, Planar antennas for wireless communications, John Wiley & Sons, 2003	☐
	2	SIM, An internal triple-band antenna for PCS/IMT-2000/Bluetooth applications, IEEE Antennas and Wireless Propagation Letters, 2004, Vol. 3	☐

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U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5572223		1996-11-05	PHILLIPS	
	2	6384790	B2	2002-05-07	DISHART	
	3	7126537	B2	2006-10-24	COHEN	
	4	7069043	B2	2006-06-27	SAWAMURA	
	5	4123756		1978-10-31	NAGATA	

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Application Number	12228487 ~~12228487 - GAU: 2821~~
Filing Date	2008-08-13
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	Not Yet Assigned
Attorney Docket Number	47005-P018WUSC1

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16

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	12/228,487
Filing Date	8-13-2008
First Named Inventor	JAUME ANGUERA PROS
Art Unit	2821
Examiner Name	NA
Attorney Docket Number	47405-8018WUSC1

U.S.PATENTS						
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	1	4389651		1983-06-21	TOMASKY	
	2	5337065		1994-08-09	BONNET ET AL.	
	3	5943020		1999-08-24	LIEBENDOERFER ET AL.	
	4	6271794		2001-08-07	GEERAERT	
	5	6822611		2004-11-23	KONTOGEORGAKIS ET AL	
	6	6963310		2005-11-08	HORITA ET AL.	
	7	7068230		2006-06-27	QI ET AL.	

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U.S.PATENT APPLICATION PUBLICATIONS

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	~~10584442~~ 12/228,487
Filing Date	~~200€ 18~~ 12228487 - GAU: 2821 8-13-2008
First Named Inventor	JAUME ANGUERA PROS
Art Unit	2821
Examiner Name	NA
Attorney Docket Number	~~68349-00025USPX~~ 47005-P018WUSC1

(17)

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20050259031		2005-11-24	SANZ ET AL.	

If you wish to add additional U.S. Published Application citation information please click the Add button.

FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐

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NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1		☐

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EXAMINER SIGNATURE

Examiner Signature	/Hoang Nguyen/	Date Considered	8/23/2010

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[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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PTO/SB/08a (08-03)
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(18)

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12/228,487
	Filing Date	8-13-08
	First Named Inventor	Dros
	Art Unit	2821
	Examiner Name	
	Attorney Docket Number	47005-P018W45C1

U.S.PATENTS						
Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6343208	B1	2002-01-29	YING	
	2	6614400	B2	2003-10-02	EGOROV	
	3	5248988		1993-09-28	MAKINO	
	4	5457469		1995-10-10	DIAMOND	
	5	5990838		1999-11-23	BURNS	
	6	5986610		1999-11-16	MIRON	
	7	6266023	B1	2001-07-24	NAGY	
	8	6801164	B2	2004-10-05	BIT-BABIK	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.N./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	12/228,487
Filing Date	8-13-2008
First Named Inventor	Pros
Art Unit	2821
Examiner Name	
Attorney Docket Number	47005-P018W4SC1

19

	9	6281846	B1	2001-08-28	PUENTE	
	10	4123756		1978-10-31	NAGATA	
	11	5572223		1996-11-05	PHILLIPS	
	12	6384790	B2	2002-05-07	DISHART	
	13	7126537	B2	2006-10-24	COHEN	
	14	7069043	B2	2006-06-27	SAWAMURA	

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20020140615	A1	2002-10-03	PUENTE BALIARDA	
	2	20010050637	A1	2001-12-13	AOYAMA	

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FOREIGN PATENT DOCUMENTS

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First Named Inventor	Pros
Art Unit	2821
Examiner Name	
Attorney Docket Number	47005-P018WUSC1

(20)

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	2004042868	WO	A1	2004-05-21	FRACTUS		☐
	2	1367671	EP	A2	2003-12-03	NGK SPARK PLUG CO. LTD.		☐
	3	03034538	WO	A1	2003-04-24	FRACTUS		☐
	4	0938158	EP	A2	1999-02-17	NOKIA MOBILE PHONES LTD.		☐
	5	03034544	WO	A1	2003-04-24	FRACTUS SA		☐
	6	2004001894	WO	A1	2003-12-31	FRACTUS SA		☐
	7	02078123	WO	A1	2002-10-03	TELEFONAKTIEBOLAG ET LM ERICSSON		☐
	8	2001332924	JP		2001-11-30	SHARP KK		☐
	9	10247808	JP		1998-09-14	MURATA MANUFACTURING		☐
	10	2002050919	JP		2002-02-15	TAIYO YUDEN		☐

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12228487 - GAU: 2821

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12/228,487
	Filing Date	08/13/2008
	First Named Inventor	Pros
	Art Unit	2821
	Examiner Name	
	Attorney Docket Number	47005-P018U45C1

(21)

	11	0938158	EP		1999-08-25	NOKIA MOBILE PHONES LTD		☐

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T5
	1	PUENTE, Fractal antennas, Universitat Politècnica de Catalunya, 1997	☐
	2	PUENTE, Multiband fractal antennas and arrays, Fractals engineering - from theory to industrial applications, 1994	☐
	3	NAKANO et al. Realization of dual-frequency and wide-band VSWR performances using normal-mode helical and inverted-F antennas, IEEE Transactions on Antennas and Propagation, 1998, vol. 46, No. 6	☐
	4	MORISHITA et al., Design concept of antennas for small mobile terminals and the future perspective, IEEE Antennas and Propagation Magazine, 2002	☐
	5	DOU et al, Small broadband stacked planar monopole, Willey Interscience, 2000	☐
	6	STRUGATSKY, Multimode multiband antenna. Tactical communications: Technology in transition. Proceedings of the tactical communications conference, 1992	☐
	7	SZKIPALA, Fractal antennas, TEAT, 2001	☐

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12/228,487
	Filing Date	08/13/2008
	First Named Inventor	Ros
	Art Unit	2821
	Examiner Name	
	Attorney Docket Number	47005-P018W45C1

EXAMINER SIGNATURE			
Examiner Signature	/Hoang Nguyen/	Date Considered	8/23/2010

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[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(**Not for submission under 37 CFR 1.99**)

Application Number	12228487
Filing Date	2008-08-13
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	Nguyen, Hoang V
Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
/H.N./	1	20040106428		2004-06-03	SHOJI	
/H.N./	2	20040203529		2004-10-14	HONG ET AL	
/H.N./	3	20050239519		2005-10-27	SAITOU ET AL	

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FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487 12228487 - GAU: 2821
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
/H.N./	1	US95/001462 , 95/000590 - Third party requester's notice of appeal for US patent 7411556, dated on April 12, 2012	☐
/H.N./	2	US95/001462, 95/000590 - Reply to Third Party Requester's notice of appeal filed on April 12, 2012 for US patent 7411556, dated on May 31, 2012	☐
/H.N./	3	US12/652974 - Notice of allowance dated on May 21, 2012	☐
/H.N./	4	US13/029382 - Notice of allowance dated on May 10, 2012	☐
/H.N./	5	Lu , Jui-Han ; Tang , Chia-Luan ; Wong , Kin-Lu, Single-feed slotted equilateral triangular microstrip antenna for circular polarization, IEEE Transactions on Antennas and Propagation, July 1999	☐

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EXAMINER SIGNATURE

Examiner Signature	/Hoang Nguyen/	Date Considered	03/01/2013

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12228487	PROS ET AL.
	Examiner	Art Unit
	HOANG V NGUYEN	2821

CPC		
Symbol	Type	Version

CPC Combination Sets				
Symbol	Type	Set	Ranking	Version

US ORIGINAL CLASSIFICATION		INTERNATIONAL CLASSIFICATION									
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED				
343	700MS	H	0	1	Q	1 / 38 (2006.0)					
CROSS REFERENCE(S)		H	0	1	Q	1 / 36 (2006.0)					
		H	0	1	Q	1 / 24 (2006.01.01)					
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)										
343	895	702									

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	45	
/HOANG V NGUYEN/ Primary Examiner.Art Unit 2821	03/01/2013	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	10

U.S. Patent and Trademark Office

Part of Paper No. 030113

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12228487	PROS ET AL.
	Examiner	**Art Unit**
	HOANG V NGUYEN	2821

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	45	
/HOANG V NGUYEN/ Primary Examiner.Art Unit 2821	03/01/2013	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	10

U.S. Patent and Trademark Office

Part of Paper No. 030113

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12228487	PROS ET AL.
	Examiner	**Art Unit**
	HOANG V NGUYEN	2821

☐ Claims renumbered in the same order as presented by applicant ☒ CPA ☐ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1	2	17	18	33	34	49								
	2	3	18	19	34	35	50								
	3	4	19	20	35	36	51								
	4	5	20	21	36	37	52								
	5	6	21	22	37	38	53								
	6	7	22	23	38	39	54								
	7	8	23	24	39	40	55								
	8	9	24	25	40	44	56								
	9	10	25	26	41	41	57								
	10	11	26	27	42	42	58								
	11	12	27	28	43	43	59								
	12	13	28	29	44	45	60								
	13	14	29	30	45										
	14	15	30	31	46										
	15	16	31	32	47										
1	16	17	32	33	48										

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 45	
/HOANG V NGUYEN/ Primary Examiner.Art Unit 2821 (Primary Examiner)	03/01/2013 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 10

U.S. Patent and Trademark Office Part of Paper No. 030113

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12228487	PROS ET AL.
	Examiner	Art Unit
	HOANG V NGUYEN	2821

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
343	700MS, 702, 895, 833, 834	5/19/11	HN
343	700MS, 702, 895, 833, 834	4/12/12	HN
343	700MS, 702, 895, 833, 834	3/1/13	HN

SEARCH NOTES		
Search Notes	Date	Examiner
see EAST search history	5/19/11	HN
EAST	4/12/12	HN
Inventor search	4/12/12	HN
EAST	3/1/13	HN

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
343	700MS, 895, 702	5/19/11	HN
343	700MS, 895, 702	4/12/12	HN
343	700MS, 895, 702	3/1/13	HN

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
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Application Number	12228487
Filing Date	2008-08-13
First Named Inventor	Jaume Anguera Pros et al.
Art Unit	2821
Examiner Name	H.V. Nguyen
Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
/H.N./	1	8253633		2012-08-28	SANZ ET AL	
/H.N./	2	8259016		2012-09-04	SANZ ET AL	

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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	Application Number	12228487
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	First Named Inventor	Jaume Anguera Pros et al.
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	Examiner Name	H.V. Nguyen
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/H.N./	1	US95/001462 - US95/000590 - Inter partes reexamination certificate for US7411556 No date avail.	☐

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Examiner Signature	/Hoang Nguyen/	Date Considered	03/07/2013

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	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

/H.N./	1	US13/556626 - Office action dated November 06, 2012	☐

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Examiner Signature	/Hoang Nguyen/	Date Considered	03/01/2013

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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	788171	antenna	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/03/01 12:04
L2	843213	pcb or (circuit adj board)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/03/01 12:05
L3	2404695	ground$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/03/01 12:05
L4	3066968	feed$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/03/01 12:05
L5	704048	(two or second or dual or plurality or multi$3) near3 (band or frequenc$3 or resonance)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/03/01 12:06
L6	12113	fractal	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/03/01 12:06
L7	58	grid adj dimension adj curve	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/03/01 12:06
L8	637	space adj filling adj curve	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/03/01 12:06
L9	0	multi adj level adj curve	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/03/01 12:06
L10	214	1 and 2 and 3 and 4 and 5 and (6 or 7 or 8 or 9)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/03/01 12:07

3/1/2013 12:07:40 PM

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	12228487
Filing Date	2008-08-13
First Named Inventor	Jaume Anguera Pros
Art Unit	2821
Examiner Name	Nguyen, Hoang V
Attorney Docket Number	47005-P018WUSC1

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					

If you wish to add additional U.S. Published Application citation information please click the Add button.

FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐

If you wish to add additional Foreign Patent Document citation information please click the Add button

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12228487
	Filing Date	2008-08-13
	First Named Inventor	Jaume Anguera Pros
	Art Unit	2821
	Examiner Name	Nguyen, Hoang V
	Attorney Docket Number	47005-P018WUSC1

/H.N./	1	US95/001462 , 95/000590 - Right of appeal notice for US patent 7411556, dated on March 12, 2012	☐
/H.N./	2	Document 1082 - Joint motion to dismiss HTC, dated September 13, 2011	☐
/H.N./	3	Document 1088 - Samsung's motion to determine intervening rights in view of new Federal Circuit case law or, in the alternative, to stay the case pending the outcome of reexamination, dated October 19, 2011	☐
/H.N./	4	Document 1092 - Samsung's reply in support of its motion to determine intervening rights in view of new Federal Circuit case law or, in the alternative, to stay the case pending the outcome of reexamination, dated November 14, 2011	☐
/H.N./	5	Document 1091 - Fractus's response to Samsung's motion to determine intervening rights or to stay the case pending the outcome of reexamination, dated November 02, 2011	☐
/H.N./	6	Document 1083 - Order - Final consent judgement HTC, dated September 15, 2011	☐
/H.N./	7	US95/001413 - US95/000593 - US95/000598 - Action Closing Prosecution dated on April 20, 2012 for US patent 7148850, dated April 20, 2012	☐

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature	/Hoang Nguyen/	Date Considered	03/01/2013

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

61060 7590 03/25/2013
WINSTEAD PC
P.O. BOX 131851
DALLAS, TX 75313

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/228,487	08/13/2008	Jaume Anguera Pros	47005-P018WUSC1	6222

TITLE OF INVENTION: MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1780	$300	$0	$2080	06/25/2013

EXAMINER	ART UNIT	CLASS-SUBCLASS
NGUYEN, HOANG V	2821	343-7000MS

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 Winstead PC
2
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: Fractus, S.A.
(B) RESIDENCE: (CITY and STATE OR COUNTRY): Barcelona, Spain

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:
☒ Issue Fee
☒ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number 232426 (enclose an extra copy of this form).

PTOL-85 (Rev. 02/11)

5. **Change in Entity Status** (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

NOTE: Absent a valid certification of Micro Entity Status (see form PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

☐ Applicant asserting small entity status. See 37 CFR 1.27

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

☐ Applicant changing to regular undiscounted fee status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature /Stanley R. Moore/ Date May 3, 2013

Typed or printed name Stanley R. Moore Registration No. 26,958

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Electronic Patent Application Fee Transmittal

Application Number:	12228487
Filing Date:	13-Aug-2008
Title of Invention:	MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES
First Named Inventor/Applicant Name:	Jaume Anguera Pros
Filer:	Ross Robinson/Brenda Brown
Attorney Docket Number:	47005-P018WUSC1

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Publ. Fee- Early, Voluntary, or Normal	1504	1	300	300
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl Issue Fee	1501	1	1780	1780

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**2080**

Electronic Acknowledgement Receipt	
EFS ID:	15687598
Application Number:	12228487
International Application Number:	
Confirmation Number:	6222
Title of Invention:	MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES
First Named Inventor/Applicant Name:	Jaume Anguera Pros
Customer Number:	61060
Filer:	Ross Robinson/Brenda Brown
Filer Authorized By:	Ross Robinson
Attorney Docket Number:	47005-P018WUSC1
Receipt Date:	03-MAY-2013
Filing Date:	13-AUG-2008
Time Stamp:	15:38:00
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$2080
RAM confirmation Number	2224
Deposit Account	232426
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	Issue_Fee_Transmittal_1.PDF	71983 213f0ee7cfca29a1d8b83a94fff77c0717feec8e	no	2
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	31937 8c6d1919751b8d7ebbfc0d665d10da604b300de9	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	103920		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/228,487	06/04/2013	8456365	47005-P018WUSC1	6222

61060 7590 05/15/2013

WINSTEAD PC
P.O. BOX 131851
DALLAS, TX 75313

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 664 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Jaume Anguera Pros, Vinaros, SPAIN;
Carles Puente Baliarda, Barcelona, SPAIN;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

REVOCATION OF POWER OF ATTORNEY
AND NEW POWER OF ATTORNEY BY ASSIGNEE
AND STATEMENT UNDER 37 C.F.R. §3.73(c) (pre-AIA §3.73(b))

The Assignee of the entire right, title, and interest in the applications identified in the attached Schedule A hereby revoke all previously granted powers of attorney given in said applications and grant the registered practitioners of EDELL, SHAPIRO & FINNAN, LLC included in the Customer Number provided below, power to act, prosecute, and transact all business in the U.S. Patent and Trademark Office in connection with said applications, any applications claiming priority to said applications, and any patents issuing therefrom.

The Assignee certifies that to the best of his knowledge and belief, it is the owner of the entire right, title, and interest in said applications as evidenced by assignment previously recorded in the U.S. Patent and Trademark Office as listed in Schedule A.

Please direct all correspondence concerning the applications to:

EDELL, SHAPIRO & FINNAN, LLC
9801 Washingtonian Boulevard, Suite 750
Gaithersburg, MD 20878
(301) 424-3640

CUSTOMER NUMBER: 27896

The undersigned (whose titles are supplied below) are empowered to sign this statement on behalf of the Assignee.

Date: 9 March 2022

Signature: _____

Name: Ruben Bonet
Title: President and CEO
Company: Fractus, S.A.

Application Number	Application Date	Title	Patent Number	Grant Date	Status	Reel/Frame
11/021597	12/23/2004	Multiband antenna for handheld terminal	US7486242	2/3/2009	Granted	016875/0195
12/246964	10/7/2008	Antenna with one or more holes (Multihole antenna)	US7907092	15/03/2011	Granted	021807/0618
11/033788	1/12/2005	Notched-fed antenna	US7342553	3/11/2008	Granted	016169/0040
11/075980	3/9/2005	Coupled multiband antennas	US7315289	1/1/2008	Granted	016596/0954
11/040622	1/21/2005	Integrated circuit package including miniature antenna	US7095372	8/22/2006	Granted	016731/0090
11/713324	3/2/2007	Multiband monopole antenna for a mobile communications device	US7403164	22/07/2008	Granted	016977/0289
12/055748	3/26/2008	Multiband monopole antenna for a mobile communications device	US7675470	3/9/2010	Granted	020739/0497
12/652974	1/6/2010	Multiband monopole antenna for a mobile communications device	US8253633	28/08/2012	Granted	023760/0594
13/029382	17/02/2011	Multiband monopole antenna for a mobile communications device	US8259016	9/4/2012	Granted	025984/0841
12/364066	2/2/2009	Miniature antenna having a volumetric structure	US8149171	4/3/2012	Granted	022374/0808
13/400895	2/21/2012	Miniature antenna having a volumetric structure	US8593349	26/11/2013	Granted	027767/0576
10/584442	18/07/2006	Multiband monopole antennas for mobile communications devices	US7423592	9/9/2008	Granted	017963/0702
12/228487	13/08/2008	Multiband monopole antennas for mobile communications devices	US8456365	6/4/2013	Granted	021687/0563
10/587119	29/08/2006	Multiband monopole antennas for mobile network communication	US7417588	26/08/2008	Granted	019729/0761
10/588640	9/8/2006	Handset with electromagnetic bra	US7456792	25/11/2008	Granted	019768/0631
11/556455	11/3/2006	Radio frequency system in package including antenna	US7791539	9/7/2010	Granted	018479/0606
11/719151	13/06/2007	Antenna structure for a wireless device with a ground plane shaped	US7782269	24/08/2010	Granted	019420/0993
11/793406	7/19/2007	Shaped ground plane for radio apparatus	US7932863	4/26/2011	Granted	019581/0966

Application Number	Application Date	Title	Patent Number	Grant Date	Status	Reel/Frame
11/886980	3/13/2009	Antenna contacting assembly	US8193998	6/5/2012	Granted	022396/0792
11/921537	2/8/2008	Wireless implantable medical device	US8565891	10/22/2013	Granted	020716/0622
11/988888	9/30/2008	Handheld device with two antennas and method of	US8115686	2/14/2012	Granted	021614/0677
13/341051	12/30/2011	Handheld device with two antennas and method of	US8362960	1/29/2013	Granted	027612/0782
13/718348	12/18/2012	Handheld device with two antennas and method of	US8810458	8/19/2014	Granted	029739/0546
11/884991	9/20/2007	Slotted ground plane used as a slot antenna or used for a pifa antenna	US7872605	1/18/2011	Granted	019852/0289
12/958522	12/2/2010	Slotted ground plane used as a slot antenna or used for a pifa antenna	US8111199	2/7/2012	Granted	025601/0698
13/336127	12/23/2011	Slotted ground plane used as a slot antenna or used for a pifa antenna	US8593360	11/26/2013	Granted	027520/0274
12/226024	11/14/2008	Wireless portable device including internal broadcast receiver	US8472908	6/25/2013	Granted	021844/0974
12/308417	1/16/2009	Chip module, SIM card, wireless device and wireless	US8196829	6/12/2012	Granted	022120/0270

Electronic Acknowledgement Receipt

EFS ID:	45246386
Application Number:	12228487
International Application Number:	
Confirmation Number:	6222
Title of Invention:	MULTI-BAND MONOPOLE ANTENNAS FOR MOBILE COMMUNICATIONS DEVICES
First Named Inventor/Applicant Name:	Jaume Anguera Pros
Customer Number:	61060
Filer:	Mark James DeBoy/Janet Dorgan
Filer Authorized By:	Mark James DeBoy
Attorney Docket Number:	47005-P018WUSC1
Receipt Date:	16-MAR-2022
Filing Date:	13-AUG-2008
Time Stamp:	18:01:15
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	FRACTUS_POA_WithScheduleA-Signed.pdf	458111 6571535611c8ca82245ce93ed0f54c3cb4d341f2	no	3

Warnings:

Information:	
Total Files Size (in bytes):	458111

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/228,487	08/13/2008	Jaume Anguera Pros	

CONFIRMATION NO. 6222

27896
EDELL, SHAPIRO & FINNAN, LLC
9801 Washingtonian Blvd.
Suite 750
Gaithersburg, MD 20878

POA ACCEPTANCE LETTER

OC000000132563038

Date Mailed: 03/21/2022

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 03/16/2022.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/nrhayden/

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/228,487	08/13/2008	Jaume Anguera Pros	47005-P018WUSC1

CONFIRMATION NO. 6222

61060
WINSTEAD PC
P.O. BOX 131851
DALLAS, TX 75313-1851

POWER OF ATTORNEY NOTICE

OC000000132562952

Date Mailed: 03/21/2022

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 03/16/2022.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/nrhayden/

AO 120 (Rev. 08/10)

TO:	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas on the following

☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
2:22-cv-412	10/21/2022	Eastern District of Texas

PLAINTIFF	DEFENDANT
FRACTUS, S.A.	ADT LLC d/b/a ADT Security Services

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	7,471,246	12/30/2008	FRACTUS, S.A.
2	7,907,092	3/15/2011	FRACTUS, S.A.
3	8,456,365	6/4/2013	FRACTUS, S.A.
4	8,674,887	3/18/2014	FRACTUS, S.A.
5	8,738,103	5/27/2014	FRACTUS, S.A.

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

AO 120 (Rev. 08/10)

TO:	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas on the following

☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
2:22-cv-412	10/21/2022	Eastern District of Texas

PLAINTIFF	DEFENDANT
FRACTUS, S.A.	ADT LLC d/b/a ADT Security Services

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	11,349,200	5/31/2022	FRACTUS, S.A.
2			
3			
4			
5			

In the above---entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above---entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE

Copy 1---Upon initiation of action, mail this copy to Director Copy 3---Upon termination of action, mail this copy to Director
Copy 2---Upon filing document adding patent(s), mail this copy to Director Copy 4---Case file copy