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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 3

Complete if Known	
Application Number	New
Filing Date	05-22-09
First Named Inventor	Dale Thornberry
Art Unit	
Examiner Name	
Attorney Docket Number	020283-000011

U.S. PATENT DOCUMENTS

Examiner initial *	Cite No. 1	Document Number: Number	Document Number: Kind Code[2] (if known)	Publication Date MM-DD-YY	Name of Patentee or Applicant of Cited Document	Pages, columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	US-2008/0262789		10-23-08	Pershing	
	2	US-4,497,551		02-05-85	Lapeyre	
	3	US-5,699,444		12-16-97	Palm	
	4	US-5,995,765		11-30-99	Kaneko et al.	
	5	US-6,798,925		09-28-04	Wagman	
	6	US-7,046,839		05-16-06	Richer et al.	
	7	US-7,085,400		08-01-06	Holsing et al.	
	8	US-7,133,551		11-07-06	Chen et al.	
	9	US-7,133,570		11-07-06	Schreier et al.	
	10	US-7,239,761		07-03-07	Weilenmann	

FOREIGN PATENT DOCUMENTS

Examiner Initial *	Cite No. 1	Foreign Patent Document: Country[3] Code	Foreign Patent Document: Number[4] Kind Code (if known)[5]	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]

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1. Applicant´s unique citation designation number (optional) 2. See Kinds codes of USPTO patent Documents. at www.uspto.gov or MPEP 901.04.

3. Enter Office that isssued the document, by the two-letter code (WIPO Standard ST.3.) 4. For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.f 16 if possible. 6. Applicant is to place a check mark here if English language Translation is attached.

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Pictometry EX2022
Roofr v. Pictometry
IPR2023-00435

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 2 of 3

Complete if Known	
Application Number	New
Filing Date	05-22-09
First Named Inventor	Dale Thornberry
Group Art Unit	
Examiner Name	
Attorney Docket Number	020283-000011

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner initial *	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]
	11	"Pictometry Announces Software and Web-based Solution For Engineers, Architects, and Planners", Press Release dated January 22, 2004, Rochester, NY.	
	12	Automated Systems Research, http://www.asrsoft.com/about.html, accessed 5/22/2009	
	13	Claim Rep Measure Roof, http://www.claimrep.com/roofSize.htm, accessed on 5/22/2009	
	14	GeoSpan Aerial Imagery, http://www.geospan.com/products-services.asp, accessed on 5/22/2009	
	15	GULCH, E., MULLER, H., LABE, T., RAGIA, L., "On The Performance Of Semi-Automatic Building Extraction", University Bonn, Germany, 1998.	
	16	How To Calculate Roof Pitches in 3D From 2D Drawings, http://connected.typepad.com/connected/2007/12/how-to-calculat.html, accessed on 5/22/2009	
	17	http://eagleviewmeasurements.com, "Eagle View Roof Measurement" accessed 5/22/2009	
	18	http://estimagic.com/roofing/about-roofing-estimating.html, "About Estimagic Roof Estimator", accessed 8/22/2008	
	19	MILLER, Mark R., "Miller's Guide To Framing And Roofing, McGraw-Hill Companies, Inc., New York, 2005, pp. 131-136, 162-163.	
	20	Pictometry Online Demo, www.youtube.com/watch?v=JURSK7o0OD0, accessed on 2/6/2009	
	21	Precigeo, http://www.precigeo.com/, accessed on 5/22/2009	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 3 of 3

Complete if Known	
Application Number	New
Filing Date	05-22-09
First Named Inventor	Dale Thornberry
Group Art Unit	
Examiner Name	
Attorney Docket Number	020283-000011

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner initial *	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]
	22	Roof Area Calculator, http://www.construction-resource.com/calculators/roof-area.php, accessed on 5/22/2009	
	23	Roof Master Roof Estimating Software, http://www.vectortec.com/roofmaster_roofing_estimating_software.htm, accessed on 5/22/2009	
	24	RoofLogic Drawings and Takeoffs From Satellite Images, http://www.rooflogic.com/Products/Satellite/, accessed on 5/22/2009	
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	26	SNYDER, J., BARR, A., "Ray Tracing Complex Models Containing Surface Tessellations", California Institute of Technology, Pasadena, CA July 1987, pp. 119-128.	
	27	Somay Roof Calculator, http://www.somay.com/roof_coatings/roof_calculate/roof_calculate.html, accessed on 5/22/2009	
	28	VINCENTY, T., "Direct And Inverse Solutions Of Geodesics On The Ellipsoid With Application Of Nested Equations", Warren AFB, Wyoming, April 1975, pp. 88-93.	
	29	Ways To Determine or Calculate Roof Pitch or Roof Slope Using a Carpenters Level, http://roofgenius.com/roofpitch.htm, accessed 5/22/2009	

Examiner Signature		Date Considered	

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Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY
First Named Inventor/Applicant Name:	Dale R. Thornberry
Filer:	Daniel Lueders/Ruth Rogers
Attorney Docket Number:	020283-000011

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Utility filing Fee (Electronic filing)	4011	1	82	82
Utility Search Fee	2111	1	270	270
Utility Examination Fee	2311	1	110	110
Pages:				
Claims:				
Claims in excess of 20	2202	3	26	78
Miscellaneous-Filing:				
Petition:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**540**

Electronic Acknowledgement Receipt

EFS ID:	5386113
Application Number:	12470984
International Application Number:	
Confirmation Number:	4950
Title of Invention:	SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY
First Named Inventor/Applicant Name:	Dale R. Thornberry
Customer Number:	30565
Filer:	Daniel Lueders/Ruth Rogers
Filer Authorized By:	Daniel Lueders
Attorney Docket Number:	020283-000011
Receipt Date:	22-MAY-2009
Filing Date:	
Time Stamp:	15:33:59
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$540
RAM confirmation Number	1819
Deposit Account	233030
Authorized User	LUEDERS,DANIEL J.

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		Specification.pdf	215348 243ed22e8d623e39e0628bc83af8df6e4f53f400	yes	38

Multipart Description/PDF files in .zip description

Document Description	Start	End
Specification	1	28
Claims	29	37
Abstract	38	38

Warnings:

Information:

2	Drawings-only black and white line drawings	Drawings.pdf	1792639 0ad2101fa234e8f13812797707fa14d75fffd5ed	no	21

Warnings:

Information:

3	Oath or Declaration filed	Declaration.pdf	312400 1b0752918456e9cf6dbf57d55c2939cabf924cf3	no	4

Warnings:

Information:

4	Assignee showing of ownership per 37 CFR 3.73(b).	373b_Statement.pdf	61396 e0b125f35ae6eccb7e96a626c007be63fcc51f7e	no	1

Warnings:

Information:

5	Assignee showing of ownership per 37 CFR 3.73(b).	Assignment.pdf	250939 62db93f828c8e8efa03951c936d7885e44b4e278	no	5

Warnings:

Information:

6	Power of Attorney	Power_Of_Attorney.pdf	63300 1671ca67b8ac89fa8c18b9ac6f9498c8814fff4ab	no	1

Warnings:

Information:					
7	Information Disclosure Statement (IDS) Filed (SB/08)	IDS.pdf	681855 35c9e6eccd035ad6d5566a9b27f7ed9f1481df95	no	3
Warnings:					
Information:					
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8	NPL Documents	ASR_Roof_Estimating_Software.pdf	80599 cdfed73dac03413af174b2f31f46e741502930df	no	1
Warnings:					
Information:					
9	NPL Documents	Calculate_Roof_Pitch_From_2D_Drawings.pdf	175755 eda056954c761c500ee99f33b7c474dbcb8b5946	no	4
Warnings:					
Information:					
10	NPL Documents	Claim_Rep_Measure_Roof.pdf	88464 a23238c9a695b9911ef559e8b2baa9402bfd7039	no	1
Warnings:					
Information:					
11	NPL Documents	Construction_Resource.pdf	180634 953857bfc4adc7277ec21ca38a81e0175193fbc6	no	1
Warnings:					
Information:					
12	NPL Documents	EagleView_Technologies.pdf	200571 3048f56977018b9a0903ed97e6aff1160bdb926a	no	1
Warnings:					
Information:					
13	NPL Documents	Estimagic_Article.pdf	376609 7dc03ccf6a71f04de7a1c12b1a663b36b87e0350	no	3
Warnings:					
Information:					
14	NPL Documents	GeoSpan_Aerial_Imagery.pdf	196395 1c01a15f80ad9870efe7a65f0db99316f6688edf	no	1
Warnings:					
Information:					

15	NPL Documents	Gulch.pdf	1236282 dae18f4ac55a3ab95533b35055aa94b90b596f0a	no	8
Warnings:					
Information:					
16	NPL Documents	Millers_Guide_To_Framing_And_Roofing.pdf	794543 c4d7d9f8b7f0e3060d8c0957f47aac8f50cd6ec4	no	9
Warnings:					
Information:					
17	NPL Documents	Pictometry_Press_Release.pdf	92697 6ffe48afdc8777eaa4ca8d4a8d6b674a489120d0	no	2
Warnings:					
Information:					
18	NPL Documents	precigeo.pdf	303207 6f9ac8eb9dc172b387c6502a2e420f911fb1bd37	no	1
Warnings:					
Information:					
19	NPL Documents	Ray_Tracing_Complex_Models_Containing_Surface_Tessellations.pdf	3223470 66a76d6d0a37640b6c30815beaf09971029b5fe0	no	10
Warnings:					
Information:					
20	NPL Documents	Roof_Genius.pdf	209283 f61b805e636f64b41a1502c26086e2f81aae75d3	no	2
Warnings:					
Information:					
21	NPL Documents	Roof_Logic.pdf	433618 c97aa3c80f0cd928f144083b20e5fbf25ec8dff4	no	5
Warnings:					
Information:					
22	NPL Documents	RoofMaster_Roofing_Estimating_Software.pdf	316779 211aad0d16f1ebef0ad97f0037d2f448c45afd00	no	2
Warnings:					
Information:					
23	NPL Documents	SkyTek_Imaging.pdf	205830 e91df6fddfd9b707770a8af74a214a736fdf3f06	no	1
Warnings:					
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24	NPL Documents	Somay_Roof_Surface_Calculator.pdf	143611 62241e4925713dc7afaf4abaa278801155de6219	no	4
Warnings:					
Information:					
25	NPL Documents	Vincenty_Formula.pdf	1291874 09bde7571a81377e5f6fca2f5761cef2e2aa0f45	no	7
Warnings:					
Information:					
26	NPL Documents	YouTube_Pictometry_Online_Demo.pdf	109752 fc39ea320e548b016605b80b3af8b8a752310397	no	1
Warnings:					
Information:					
27	Fee Worksheet (PTO-875)	fee-info.pdf	36397 4575d9b53a6e350652f85879a7b53f3ed53fb033	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.

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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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SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY

FIELD OF INVENTION

The present invention is in the field of measuring roofing dimensions and other attributes, and more particularly pertains to the use of aerial imagery in that field.

BACKGROUND

Roof measuring, for example, dimension, length and areas has been done for many years, such as in connection with for estimating and bidding roofing jobs. Also, for many years, companies and products have offered such estimation services and reporting software reports using aerial imagery on which roof line outlines are traced, dimensions and areas are automatically based on those tracings, and vertical elevations (via pitch or otherwise) are included in mathematical models.

The present invention is an improvement on such aerial imagery, systems and processes, providing non-obvious features that enhance convenience, flexibility, and/or accuracy.

SUMMARY

The claims, and only the claims, define the invention. The present invention includes several, but not necessarily all, of creating a first layer and a second layer, in computer memory and substantially overlapping at least a segment of line from said first layer with at least a segment of another line from said second layer, wherein said first non-dimensional attribute is different from said second non-dimensional attribute; and/or an interactive computer file, said interactive computer file including: length numeric values and at least one user length field enabling a client with said interactive file to override at least one of said length numeric values, where said area operator may automatically recalculate area based on said length field override; and/or, providing at least one computer input field for a user to input first location data generally corresponding to the location of the building; on said imagery of an area providing a visual marker that is moveable on said computer monitor around a region, said marker initially corresponding to said first location data, wherein said marker may be moved to a final location on top of the building to more precisely identify the location of the building roof structure; and providing a computer input capable of signaling user-acceptance of the final location of said marker; and/or other features, optionally combined in various ways as set forth in the claims.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is one example of a flow chart of acts according to the present invention.

FIG. 2 is another example of a flow chart of acts according to the present invention.

FIG. 3 is another example of a flow chart of acts according to the present invention.

FIG. 4A is one example of a computer screen shot to enter an address.

FIG. 4B is one example of a computer screen shot depicting imagery and a marker based on an address.

FIG. 4C is a computer screen shot like FIG. 4B with the marker moved over a selected building.

FIG. 4D is a computer screen shot and/or reporting confirming selection of a building.

FIG. 5A is an example of reporting.

FIG. 5B is another example of a screen shot and/or reporting.

FIG. 5C is another example of a screen shot and/or reporting.

FIG. 5D is another example of a screen shot and/or reporting.

FIG. 5E is another example of a screen shot and/or reporting.

FIG. 5F is another example of a screen shot and/or reporting.

FIG. 5G is another example of a screen shot and/or reporting.

FIG. 5H is another example a screen shot and/or of reporting.

FIG. 5I is another example of a screen shot and/or reporting.

FIG. 6 is another example of a screen shot and/or reporting.

FIG. 7A is a top plan view of aerial imagery of a building roof structure.

FIG. 7B is a display of the imagery of FIG. 7A with some optional features.

FIG. 7C depicts the imagery of FIG. 7A with shadowing.

FIG. 7D depicts FIG. 7C with the addition of computer generated line.

BRIEF DESCRIPTION OF THE PREFERRED EMBODIMENTS

For the purposes of promoting an understanding of the principles of the invention, reference will now be made to the examples, sometimes referred to as embodiments, illustrated and/or described herein. Those are mere examples. It will nevertheless be understood that no limitation of the scope of the invention is thereby intended. Such alterations and further modifications in the described processes, systems or devices, any further applications of the principles of the invention as described herein, are contemplated as would normally occur to one skilled in the art to which the invention relates, now and/or in the future in light of this document.

As used in the claims and the specification, the following terms have the following definitions:

The term "adjustment roof plane" means a roof plane, having at least three border lines, that may be hidden (partially or totally) from view from some or all aerial imagery and which may be included to add to (or subtract from) an aggregate roof area or other attributes.

The term "aerial imagery" means pictures, normally including photographs (visual light, infrared, color, black and white, or otherwise) taken from an overhead view (straight down, oblique, or otherwise) with respect to a building roof. This may include imagery taken from airplanes, satellites, balloons, or otherwise.

The term "attributes" means one or more distinguishing or identifying characteristic.

The term "border line" means a line segment, straight, curved, free form or otherwise that generally corresponds with the edge of a roof plane.

The term "building" means a real estate structure, such as for example, a house, condominium, office building, outbuilding, garage, warehouse, factory or otherwise.

The term "client" means a person or entity that orders or obtains an aerial imagery report.

The term "computer input" means data, information and/or signals provided by a computer user. This may include numbers, words, mouse clicks, "enter", check boxes, dialog boxes, and otherwise.

The term "computer monitor" includes any computer screen or other visual output, including projectors, flat panel screens, LCD screens, LED screens and otherwise that provide visual output from a computer.

The term "computer processing means" means computer hardware and software, including computer memory, microprocessors, computer code and computer logic to provide digital computing.

The term "contrast" means discernable relative differences in lightness and darkness.

The term "deliverable" means that which is or may be delivered to a client, including printed and/or electronic reports and information.

The term "digital" means using numeric digits, specifically including binary digits.

The term "direct proportion" means that one or more variables that change as a function as another value in a generally linear function.

The term "dissects" means to sub-divide into two or more parts.

The term "electronic drawing" means to draw lines and/or shapes electronically via computer. This can include pixel-based drawings, vector-based drawings, and/or otherwise.

The term "field" means a location for computer data input and/or output of a value having at least one corresponding associated place in computer memory.

The term "final location" is the relative spot for placing a marker. This normally corresponds to unique latitude and longitude coordinates.

The term "generating" means to make or create.

The term "imagery database" means a computer database containing aerial imagery computer files and the associated location coordinates.

The term "interactive computer file" is a computer file in which a user may input and/or override one or more numeric values stored in memory as part of the file.

The term "internet-based imagery" means imagery, such as aerial imagery, which is accessible through an internet access connection. One popular example is Google® Earth.

The term "latitude and longitude coordinates" mean numeric coordinates for a location on the planet corresponding to latitude (east, west) and longitude (north, south).

The term "layer" means a part of a graphic computer file that visually overlays one or more other parts and which has at least partially transparent portions allowing visualizations of parts/layers below it.

The term "lines" means a straight, curved, and/or free form segment.

The term "location data" means information which uniquely identifies geographic position. This may include latitude and longitude coordinates, street addresses and/or otherwise.

The term "non-dimensional attribute" means an attribute other than a numeric value, such as other than length, width, height, or area.

The term "numeric values" means alphanumeric numbers, and/or their binary equivalent.

The term "operator" means a mathematical function including , but not limited multiplication, division, addition, subtraction, sum, average, square root and/or the foregoing with or without constant and/or co-efficient.

The term "orientation" means the direction of something with respect to something else.

The term "outline" means the path or collection of lines generally coinciding with the outside of a shape.

The term "outline drawing" means drawing of lines around an outline.

The term "over said imagery" means position on top of and in alignment with underlying imagery.

The term "override" means to substitute or replace one value for another value. This may be done with numeric values, non-dimensional attributes and otherwise.

The term "perimeter lines" means a line or lines that outline the outer most edge of a roof structure. This can include, but is not limited to, a roof free edge with a gutter and to a roof free edge without a gutter.

The term "pitch numeric value" is a single numeric value corresponding to the pitch or slope of a portion of roofing.

The term "proportioning" means to increase or decrease the size of a line, outline or other object to directly proportional to the change in another object.

The term "region" means a location on earth that is depicted in aerial imagery. Ordinarily, it will include at least one entire building structure, and preferably, will include at least some features, such as streets, trees, or other buildings adjacent the building structure.

The term "report" means one or more pages or screen shots, or both, made available to a user including aerial imagery and/or data from such imagery. This includes, but is not limited to, one or more interactive computer files.

The term "roof flashing edge" means an edge where roofing meets with a generally vertical structure, such as a wall, typically with flashing.

The term "roof free edge with a gutter" means the unbound edge of a roof with a rain drainage gutter.

The term "roof free edge without a gutter" means the unbound edge of a roof without a rain drainage gutter.

The term "roof hip" means an edge where two roof planes meet to form a generally upward sloping ridge.

The term "roof pitch" means the slope of a roof plane. It may be expressed in angles, ratios, or otherwise. This includes stating the rise over run, as well as stating merely the rise in view of an assumed or industry standard run. For example, a slope of 6 inch rise for every 12 inch run (horizontal") may be stated to be a "6" pitch.

The term "roof plane" means a generally planer, segment of a roof.

The term "roof ridge" means an edge where two generally upward sloping roof planes meet.

The term "roof structure" means the top of a building which shelters the building from weather.

The term "roof valley" means an edge where two generally downward sloping roof planes meet.

The term "street address data" means the location typically used by postal identification, typically including at least one numeric value and at least one street name, and further typically including a zip code or other postal code and/or a town and state or province.

The term "street address look up field" means a computer field for entry of street address data.

The term "substantially overlapping" means that where one line, in whole or in substantial part, coincides with another line in terms of direction and overlap. This may include situations where the respective lines are of substantially different length, or not.

The term "substituent triangles" means two or more congruent triangles which collectively form a subset of another geometric shape.

The term "tracing" means drawing around an outline or along a line or feature depicted in imagery.

The term "user-acceptance" means an affirmative step or series of steps or computer input, undertaken by user to make a selection.

The term "vector direction" means, in relative space, either two dimensionally or three dimensionally where a vector is pointing.

The term "visual marker" is a shape, pointer, label, icon, avatar or other indicator which is movable or displayable on a computer screen and which may be visually differentiated from other objects on the computer screen.

The term "visually depicting" means to show or illustrate something on a computer monitor as a graphical image.

Articles and phases such as, "the", "a", "an", "at least one", and "a first", are not limited to mean only one, but rather are inclusive and open ended to also include, optionally, two or more of such elements.

The language used in the claims is to only have its plain and ordinary meaning, except as explicitly defined above. Such plain and ordinary meaning is inclusive of all consistent dictionary definitions from the most recently published Webster's dictionaries and Random House dictionaries.

Referring to the drawing figures, these are only examples of the invention, and the invention is not limited to what is shown in the drawings.

DETAILED DESCRIPTION OF THE DRAWINGS

Referring to FIG. 1, a process for determining attributes of a roof structure 501 (see FIGS. 4B, 4C) of a real-world three-dimensional building 500 may optionally comprise several acts. This may include viewing on a computer monitor 100 in digital aerial imagery 1 of a region 502 (see FIGS. 4B, 4C) including the roof structure 501. Ordinarily, the roof structure will have one or more roof planes, and unless the roof is a simple single-plane roof, will have at least two or more roof planes. In FIG. 1, the act of creating of a first layer drawing 2 is undertaken. Such act may be used by the ultimate end-user enabled by the software, but optionally and more preferably is done by a commercial vendor based on an order placed by a user. Such order may be placed by telephone, on-line, such as on computer screen 100 as shown in FIGS. 4A-4D, by mail, email or otherwise.

The creation of the first line drawing 2 may be done a multitude of ways, in one example is illustrated in FIGS. 5A-5I and FIG. 6, discussed further below. Likewise, in FIG. 1 creating a second layer drawing 3 is another act. For example, in FIG. 5D, various roof planes are denoted by letters A-P. For example, the roof plane 515 denoted by the letter "O" may be drawn in a second layer, whereas roof plane 516 indicated by the letter "D" may be in a first layer. In such example, roof plane 515 and roof plane 516 have substantially overlapping segments 4 (see FIG. 1). For example, along the upper edge of plane 515 appears the number "5" denoting a five foot line; whereas, plane 516 has the substantially overlapping line denoted by "7" indicating a seven foot line segment of roof plane 516. Such seven foot roof segment of plane 516 may comprise a perimeter line (part of the 56.78 feet perimeter length of plane D depicted in table 520 of report 550 of FIG. 5I); whereas, the substantially overlapping five foot length of plane 515 may

comprise a second non-dimensional attribute, namely flashing, such as step flashing line (part of the 37.01 feet of step flashing for plane O depicted in table 521 of FIG. 5I). Accordingly, this is one example of substantially overlapping lines such as segment of line A and segment of line E set forth in the claims, each having respective first and second non-dimensional attributes. This allows for separate reporting of such non-dimensional attributes, such as the length of perimeter, the length of step flashing or otherwise. Such non-dimensional attributes may be of any type. As mere examples that have use in the roofing industry include the non-dimensional attributes of roof ridge, roof hip, roof valley, roof flashing edge, perimeter line, roof free edge with a gutter, and roof free edge without a gutter. For example, line 510a in FIG. 6 is an example of a roof ridge, whereas line 511a and line 513a are each examples of a roof valley. Line 512a in FIG. 6 is an example of a perimeter edge, which also happens to comprise a roof free edge without a gutter. Optionally, while not illustrated, if line 512a had, or were to have, a gutter along it, then it would be in that case a perimeter line and be a roof free edge with a gutter. FIG. 6. also depicts an optional table and/or fields showing the non-dimensional attributes at 507 and the total values for them at 508. This can include the area of roofing 509, the linear ridge feet 510, linear valley feet 511, starter/perimeter linear feet 512, step flashing 513, and/or others.

Another optional feature is computer processing means for calculating a vector direction corresponding to roof pitch for a roof plane. Optionally, this may be based on at least one of said non-dimensional attributes of roof plane outline lines and their orientation. Such computer processing means typically includes computer logic and/or code with a set of rules to establish such vector. Examples of such vector are shown in FIG. 5E. Specifically, they are preferably shown as arrows. In the illustrated example, they are ordinarily indicated as arrows pointing in the downward direction, corresponding to the downward direction of rain flow. Optionally, there

may be other illustrations, including an upwardly directed arrow, although this is not preferred. For example, vector 516d is shown in a downwardly directed arrow with a number 6 next to it. This depicts the vector corresponding roof plane 516, namely plane D previously discussed. As seen, the value "6" for the pitch is entered at field 516c in the table also showing the area (for that particular roof plane D at field 516a) 357.93 sq. ft. as shown at field 516b. Note further with respect to roof plane 515 (plane "O") as illustrated in the table at field 515a, it likewise has a roof pitch of "6" shown at 515c. The total area of roof plane "O" is 111.35 sq. ft. in this particular example, as shown at 515b.

An example of computer programming to determine pitch direction is as follows.

1.) Pitch will run towards a perimeter line. If only one perimeter line pitch goes towards the perimeter (most standard roofs, all but the ends of hips);

2.) If there are multiple perimeters that are not parallel, look for ridge. If there is only a single ridge line and it is parallel to one of the perimeter lines, pitch runs from the ridge towards the perimeter. (Perimeters that are not straight and have small outcroppings where the roof extends further down the same slope).

3.) If a shape has no multiple perimeters and multiple ridges where none are parallel, take an average of the ridge angles and see if that direction is perpendicular to a perimeter line. If so, that direction is the direction of the pitch. (The end of hip roofs).

Most planes are resolved by the above acts, 2 and/or 3. Acts 4 and 5, below, are also optional but preferred, and are address totally enclosed roof planes which most standard roofs do not have.

4.) If there are no perimeter lines and a single ridge line, the pitch is from the ridge.

5.) If there are no perimeter lines and multiple ridge lines, once finding the pitch for all

other shapes look at the ridges and the shared shapes. If the shared shape has a pitch directly away (is perpendicular) from the shared ridge, use that ridge as if it were 2 (from above). If the other pitch goes at an angle to the ridge, look at other ridges.

The case where you can make it past act 5 and not have pitch direction is for completely enclosed shapes where all sides are valleys at the intersection of multiple planes, set forth in this optional act:

6.) take the average slope of all other planes connected via shared lines and average the slope direction of the planes whose pitch runs into the plane in question; use that direction as the pitch direction for the plane.

Variations on that logic, including changing the order, and/or combining or splitting acts, may optionally be used. For example, rather than beginning with logic looking to run pitch towards a perimeter, the logic could begin to look to first run the pitch vector away from a ridge line, although this is less preferred.

As illustrated in report 550 as seen in FIG. 5E, the visual depiction of pitch vectors, such as 516d may help visualize the shape, orientation, pitches of the roof structure and/or roof planes.

Optionally, one or more deliverables to the client include one or more reports such as report 550. Report 550 may include one or more of the features as depicted in the various drawings of FIGS. 5A-5I and/or FIG. 6 and/or FIGS 7A-&D, alone or combination.

Optionally, such report may be printed on a piece of paper, or provided on a non-interactive computer file such as a .pdf (Adobe® Acrobat®) type image or otherwise, illustrated on a computer screen for the user to print out (web based or otherwise) and/or delivered on recordable media such USB drive, floppy disk, CD, DVD, email attachment or otherwise.

However, preferably, such file is delivered as an interactive computer file. For example, referring again to FIG. 5E, the pitch value as shown in the table, such as the 6 pitch for plane D and 516c allows the person, the end-user or otherwise, to enter at least one pitch numeric value. This pitch numeric value may correspond to roof pitch of the roof plane. Hence, in FIG. 5E, one or more of the pitch values in computer fields corresponding to the table, may be empty or null. They may allow a person, such as an end user, to data input via their computer, the pitch value. For example, this may be based on the end user, or one of their agents, taking field measurements of the roof to provide the input. As such, value 516c may be entered to be "6" corresponding to a 6 pitch (e.g., 6" vertical rise for every 12" of horizontal run). Such value "6" may be changed, updated, or overridden.

As can be appreciated in three-dimensional geometry, given the shape of plane D (516) the value of the pitch ordinarily will affect the overall area of such roofing (see e.g. FIG. 5F, area value 516b).

Mathmatical equations demonstrating-area relationship for a sloped, rectangular roof plane are known, an example of which is set forth below:

Area = W x Z

Z = square root of: $(X^2 + Y^2)$

Where:

W = width

X = horizontal run

Y = vertical rise

Z = hypotenuse of X-Y-Z right triangle.

Other, geometries may be calculated using known math, coefficients and/or tables. See for example: Miller, Mark; *Miller's Guide to Roofing* (2005) ISBN 0-07-145144-7. Thus, in combination with the perimeter measurements supplied with the report based on the creation of roof plane D from the imagery, the addition of the roof pitch value may lead to the calculation such as in the example 357.93 sq. ft. shown at 516b. Likewise, for plane O, the value of "6" may be entered in the table at 515c to arrive at the area calculation 515b as previously described. It should be appreciated, that optionally these pitch values may be provided by the end user or other persons based on field measurement. However, optionally, they also may be based on measurements and/or computer calculations precisely, by estimate or otherwise, such as by viewing oblique imagery such as region image 502 shown in FIG. 4B. In such case, for example, a vendor may provide default values (and/or absolute values) for the pitch and the table shown at FIG. 5E. In an interactive computer file with such fields being interactive, and with operators to calculate area taking into account pitch, preferably part of said file, even with such default values based on oblique imagery the end user would be free to override them, such as for example if they determine that field measurements indicate a different pitch.

Another optional feature may include other attributes deliverable to the client including an interactive computer file. For example, the length values of lines forming an outline of a drawing may be overridden. For example, referring again to 5D, a reference line 514 is depicted. In this one example, it is depicted in the parenthetical quote ("R"), although this is not required. In such case, it is denoted "26" corresponding to 26 ft. in length. Note that all dimensions in this case may be converted to or express in metric, rather than English units, although for purpose of illustration English dimensions are utilized here.

In such case, even thought the referenced dimension 26 is based on scaling that line off of the imagery, such as imagery 506 (see FIG. 6; FIG. 5C) there is an opportunity for greater precision. Such interactive computer file, for example, in the report page shown at FIG. 5D, the value 26 depicted there in connection with the reference may actually be the location of a data entry field. In such case, the field operator may determine that the precise measurements are not 26 feet, but rather are 26.15 feet. In such case, the user operator may enter in their computer by typing in the value "26.15" the reference line field, thereby overriding it from 26 to 26.15 in this hypothetical. In such case, the interactive computer file may use co-efficient and other ratios to proportion (by multiplication or otherwise) some, or preferably, each of the other lines of an outline in direct proportion to the plane field override. While the foregoing is mentioned in terms of the referenced mentioned 514, optionally the interactive computer file may provide multiple reference directions and/or all line values in their report may, optionally, be interactive and override fields. As mere examples, in FIG. 5D this could include fields for 510a, 511a, 512a and/or otherwise, including without limitation most or all numeric values.

Moreover, while not illustrated, optional report 550 may include a separate table and/or field entry point apart from the drawing of the building roof structure 501 in which the reference line may be overridden instead or, or in addition to, fields directly overlying the aerial imagery and/or the drawn lines.

Optionally, but preferably, in addition to the length of the other lines being proportionally recalculated, likewise the area values, such as depicted in the area column of the table at FIG. 5E as well as the area values on FIG. 5F and/or FIG. 6 (see the total roofing area value 509 of 4096.95 sq. ft. may be automatically recalculated. This may be done in a separate application, in the interactice computer file (including with embedded operators), both or otherwise.

Various area calculations used in connection with computer data processing means are available based on known geometry. These could include things as simple as multiplying length times width of a single rectangle. They also may include modifying such area to take into account the additional area generated by pitch, as previously discussed. However, while not limited to this, preferably, taking advantage of the pixilated imagery that may be used, one optional feature in determining one or more areas of the respective roof planes is as follows. If you know the points (corners) of the shape and can order them in a clockwise (or optionally, counter-clockwise) fashion following the perimeter or outline of the shape, then the following algorithm can apply. Starting at the first endpoint, 0 (zero), while N+1 is less than the total ordered end points take the triangle made by the 3 points 0, N, and N+1 and compute the area of the triangle created, which is done by the dot product method using vectors created by going from 0 to N and 0 to N+1. Add this area to a running sum.

Note that when the three ordered endpoints are not in the proper order (they create a convex perimeter or outline of the shape that reduces the overall area as opposed to adding to), the dot product method of finding the area will return a (-)negative area which subtracts from the overall area in the running sum.

Dot product (2-Dimensional Vectors) can be expressed in the equation:

$$u \cdot v = u_1 v_1 + u_2 v_2$$

This can be used to find the area of the square that the two vectors produce. Dividing the result by two (2) gives the area of the triangle the two vectors produce.

Thus, in this way an example is provided of computer data processing means that dissects the outlines of the roof planes into substituent triangles and calculates the area of such triangles. The areas are aggregated to provide the area of respective roof planes, and the areas of such

respective roof planes may in turn be aggregated (summed) to arrive at the total area of the roof structure. Examples of this are shown in the table in FIG. 5F and/or table 517 in FIG. 5H. Note also in FIG. 5H the report 550 may also include other tables and information, such as ridge length table 518 and/or valley length table 519.

Hence, in FIG. 2, aerial imagery 1 is used and perimeter drawings around roof planes 5 are acts. Thereafter, one or more interactive computer files are delivered 6. The user may enter values in the interactive computer file 7, such as pitch, length, or otherwise as discussed. This may result in the act of updating the report 8.

Another optional feature is to provide for user acceptance of the final location of a roof structure. One optional way to do this is to provide an internet based interface for the customer/user. One example of such is shown in FIGS. 4A-4D. For example, in FIG. 4A, computer screen 100 provides a place to enter an address, such as field 102 for address entry (denoted by label 101). In the illustrated example, the street address "1710 Strand Ave, Tybee Island, GA. 31328" may be entered in field 102 of the computer. The user may enter by clicking or otherwise button 103 to find that address. In response, computer screen 100 may appear like FIG. 4B. As such, it may depict imagery 502 of a region, the region including building 500 with its roof structure 501. Ordinarily, this includes not only the building structure 500, but also depicts adjacent buildings, trees, streets, and/or other features. Such imagery may come from a variety of places. One example could be Google® Earth imagery database which is web based and provides address location information. Such imagery covers much of the world, although it may or may not be comparatively low resolution imagery. In FIG. 5B, marker 106a is shown in the region 502, corresponding to the street address in field 102. Note further that while marker 106a is close to roof structure 501, it does not directly or

perfectly correspond to roof structure 501. As such, the customer or other user may be allowed to move the marker (by click and dragging via computer mouse, arrows, or otherwise) to a final location 106b as depicted in FIG. 4C. Such final location is on top of the building 500 and such movement more precisely identifies the location of the building roof structure 501 to be measured. Optionally, in FIG. 4C when said marker has been moved to final location 106b, the user may activate a selection confirmation, such as confirm selection button 104, enter, checkbox or otherwise. Optionally, to potentially start over the user may be afforded the option of hitting the cancel button 105 or merely logging off. However, if confirmed selection button 104 or other such user acceptance is activated, another screen (and/or report) optionally may be provided, such as screen 100 as depicted in FIG. 4D. While this may be a wide variety in the formats, in the one example provided, some or all of the regional image 502a may be depicted showing the marker in its final location 106b. Also, a checkbox may be providing a further reconfirmation that the users reviewed the image is correct. In this way, the end user/customer will be sure that when placing an order, the vendor is measuring the correct roof structure as opposed to, for example, measuring the nearby roof structure due to mistake/miscommunication. Optionally, as shown in FIG. 4D, fields may depict the address to be measured 108, the city 109, the state 110, the postal code 111, and otherwise. Optionally, a drop down box 112 may be provided corresponding to the number of planes ordered. Additionally, other options, such as rush processing 113 or other special features may be provided. Also optionally, a reference number or other such job number field 114 or claim number field 115 and/or other fields may be available. Thus, for example, a roofer having a job number and/or bidding pursuant to an insurance claim number and/or an insurance company doing the same may optionally enter data wherein. When they do so, optionally, such

reference numbers and/or claim numbers may be reprinted or otherwise depicted on the deliverables to the client, such as report 550. This provides convenience to the end user/customer in that they may cross reference their deliverable report to their internal calendaring, docketing, invoicing, and/or job number system.

Also with reference to FIG. 4D, computer screen 100 and/or the reports may also depict latitude references and/or longitude references corresponding to the street address and/or more precisely to the final location 106b of the marker confirmed by the end user. Again, optionally, such latitude and longitude coordinates may be reflected in one or more of the reports.

Such translation to latitude and longitude coordinates also provides another optional feature. The present system and method may optionally include two or more separate imagery databases. For example, a lower resolution and/or less expensive image database such Google® Earth may be used as a first database, whereas a higher quality, higher resolution and/or more robust image database, such as by Pictometry International (as depicted here) may be used. Other vendors of imagery databases may be used and/or one may use their own image database(s). Thus, by translating the street address stated in longitude and latitude, it is easier to correlate to the second database. In this way, first imagery database from which the final location is selected may be internet based imagery having to corresponding street address look up field. Only further using the latitude and longitude coordinates to access imagery from a second imagery database, such as for example Pictometry's database. Thereafter, using the imagery from the second database can generate in computer memory outline drawings around outlines corresponding to roof planes based on tracing from imagery from said second imagery database. Such outline drawings may include drawings such as depicted in FIGS 5D, 5E, 5F, 5G and/or FIG. 6 and/or 7B-D for example. Additionally, since the first imagery database may

merely be straight down, or plan views, whereas the second imagery may include a variety of oblique images, such as image 502 and 503 in FIG. 5A and/or oblique imagery 504 and 505 in FIG. 5B, as well as diagonal, top down imagery such as image 506 in FIG. 5C. This allows the optional, more complete image reporting to the client in report 505.

Such oblique imagery also permits the optional feature, as previously discussed, determining vertical measurements and/or roof pitches based on the imagery, as opposed to based on field measurements. Conversely, one can undertake this without any oblique imagery and/or any determination of vertical measurements or pitch, and instead rely on field measurements or other means for pitch.

In FIG. 3, the location data 4A is entered. Aerial imagery with a marker is provided 4B. A person moves the marker on the image of the building 4C. User acceptance of that marker position is then signaled 104b.

Mere examples of other optional features are depicted in FIG. 7A and 7B. A simplified diagrammatic image of building 700 includes roof structure 701. While several roof planes are illustrated, the particular focus is directed to roof planes 715 and 716. As illustrated in FIG. 7B, a first electronic drawing (preferably in a first layer of the drawing) is made over the imagery comprising lines A, B and C. Moreover, a second electronic drawing (preferably, but not necessarily, in a second layer of the drawing) is made over to imagery comprising lines E, F, G and H. Note that in this illustrated example, at least a segment of line A is substantially overlapping with at least a segment of line E. Thus, for example, roof plane 715 outlined by E, F, G and H may comprise a flat roof (0 pitch) porch whereas the remainder of the roof structure 701 may comprise a hip roof over a rectangular house, the hip roof being depicted in a plan view with two triangles and two isosceles rhombuses, as shown.

Note further that FIG. 7B preferably is depiction of a deliverable, such as a report (and/or a screen shot), and optionally and more preferably is part of an interactive computer file. In this regard, it may include, optionally, table 720 and/or 721, as well as any of the other tables and/or fields and/or features previously depicted in the previous drawings. For example, table 721 includes at least columns with a line and a column for the attribute, which preferably in this context is the non-dimensional attribute. Note in the example of these substantially overlapping lines A and E, A has the attribute of being a gutter free edge, whereas E has the attribute label "common".

In this regard, the label "common" also corresponds to Line E' in connection with roof plane 717' illustrated in isolation as roof plane 717. Other terms may be used instead of "common", but this indication denotes two lines that are substantially overlapping and in which the main purpose of the line is merely for dissecting a common roof plane, normally for determining square feet area, as opposed to a non-dimensional attribute. This is because such "common" lines, in a sense, are imaginary between roof plane 715 and roof plane 717' and/or 717. Alternatively, in the context of this building the attribute of line E could be "flashing" (instead of line Y being flashing) based on the reasonable assumption that this flat planed porch roof abuts the side of the building and has roof flashing along line Y. However, in such situation by denoting line E as flashing, in lieu of line Y, since they are of common length, this is merely a substitute for the total linear estimate of flashing of the type illustrated, for example at 513 (FIG. 6) and/or table 521 (FIG. 5I).

Plane 716 illustrates a minimum number of three lines, A, B and C, to denote the area of plane 716. Conversely, note that plane 715 includes not only three lines, lines E, F and G, but also a fourth line, line H since it rectilinear. This is consistent with the claiming of the present

invention being open-ended in that at least three lines are required to define a roof plane, but it may be more. Likewise, a plane may be defined by 5, 6, 7 or more lines depending on its particular geometry.

As mentioned, it is not required, but is preferable that the lines defining the respective plane 715 and 716 are separate from each other, and even more preferable that they be in separate computer file layers overlaying one another. This helps facilitate having differing attributes along a common line as previously described in connection with the substantial overlap of lines A and E. Optionally, in the report the lines may be shown in different colors (and/or patterns) designated for each non-dimensional attribute.

Moreover, one or more additional adjustment planes, such as adjustment plane 717 prime, also depicted as free standing adjustment plane 717 may optionally be provided. This allows generating computer memory at least one adjustment roofing plane, such as by drawing lines E', X, Y and Z (as well as others). This is useful for a variety of situations, such as, for example, to adjust for portions of the roof structure which are not fully visible from the aerial imagery. This is shown in FIG. 7A and 7B in that due to the overhanging eve of the hip roof of the house in plane 716, part of the porch's roof structure is hidden by the overhanging roof hang. This hidden portion is depicted by roof plane 717' and/or 717.

It should also be noted that optionally, this adjustment plane does not necessarily have to be graphically depicted, as shown in FIG. 7B. Rather, or in addition, an additional numeric field may be provided. For example, in FIG. 5F, the planes A-P are shown with their respective areas, and in some total of such areas. In this context, with or without a graphical depiction, an additional "plane" row may be provided denoted "adjustment" or otherwise with a numeric field allowing user entry of a area (square foot or otherwise) number be typed in or otherwise

imported. Thus, the adjustment plane 717 (FIG. 7B) even if not graphically depicted, might have known dimensions of, for example, 20 feet wide, with a two foot pitch overhand, resulting in an additional 40 feet of area. In this situation, in the adjustment field the user might simply enter the value "40" in square footage terms for the adjustment field. This adjustment field will be added to the sum total, such as shown in the table of FIG. 5E. Note also that the adjustment value may be negative for a variety of reasons, given the user the ability to override and reduce the total estimation of square footage for reasons of discounting, or other circumstances.

Thus, for example, in FIG. 7B at table 21, it is denoted in that table as plane 717 with corresponding area of 40 square feet may correspond to a report that it is 20 feet wide (line E prime times 2 feet deep under the eaves, lines X and/or Z, thereby resulting in the calculation of 40 square feet. Or, as described above, alternatively with or without graphic depiction of plane 717, the user might simply enter the value "40" square feet in the area field of table 721.

FIG. 7C and 7D, using the same structure of 7A and 7B, illustrate another feature which is optional, and may be used alone, or in connection with one or more of the features previously described. In particular, it provides for a computer data processing means that identifies light and dark contrast between adjacent roof planes, such as roof planes 716 and 718, and based on that automatically generates at least one border line, such as for example line 719 shown in FIG. 7D between such roof plane 716 and 718. In this regard, note that as illustrated in FIG. 7C and D, roof plane 716 is shown as shaded. This represented in imagery of shadowing, typically caused by sun or other lighting casting different degrees of shadow in brightness and darkness depending on the orientation of the roof plane with the source of the light. The generation of various lines, such as line 719, is automatically computer generated. This may be done by a variety of techniques borrowed from the separate field of computer face recognition used in

connection with digital images such as for security purposes. This may be done to create some or all of the line values, or more preferably at least starting point default lines drawing by the computer. However, optionally the default generation of the lines can be done after perimeter lines P, around the entire outer perimeter of the roof structure 701, having drawn ordinarily by a human user. This has the advantage of establishing a closed, finite area within the region for which the computer software automatically generates one or more of the lines separating the geometries of the separate roof planes. Preferably, this is done by generating and labeling discreet lines which may be overridden by the user, such as deleting extraneous or erroneous or duplicative lines and/or moving them. Moreover, optionally such lines may be generated as the subparts of geometric shapes set as presumptive default shapes common in roof planes. This normally would include rectangles, triangles and rhombuses.

Additionally, such automatic and/or default generation of lines may optionally be coupled with the previously described pitch generation algorithms. In this way, default pitches may be generated by the computer and depicted in the report output. Again, this can be overridden by the user, including the vendor of such report information.

Note also that in FIG. 7A-7D, the various lettered lines (A, B, C, E, F, G, H), are illustrated here slightly offset from the actual underlying line in the building imagery. In practice, preferably so as to maximize accuracy, there is not such offset. Rather, the offset is depicted here in FIG. 7A-D merely for drawing clarity to separately depict the line in the aerial image from the computer drawn line overlaying the image.

Another optional feature is that the information, including reporting, may be made to interface electronically (and/or manually) with other products. For example, the information provided here may be uploaded or transferred to Exaxtimate™ Insurance estimating software

known in the prior art. Naturally, this feature, while helpful, is not required.

What is claimed is:

1. A process for determining attributes of a roof structure of a real-world three-dimensional building, comprising the acts of:

Viewing on a computer monitor digital aerial imagery of a region including the roof structure, the roof structure having at least a first roof plane and a second roof plane;

Creating an electronic drawing first layer over said imagery;

Creating an electronic drawing second layer over said imagery;

In creating said first layer, generating in computer memory a first outline drawing around a outline corresponding to and visually depicting said first roof plane, said outline including at least three lines, namely A, B and C lines;

In creating said second layer, generating in computer memory a second outline drawing around a outline corresponding to and visually depicting said second roof plane, said outline including at least three lines, namely E, F and G lines;

In creating said first layer and said second layer, in computer memory:

(a) substantially overlapping at least a segment of line A from said first layer with at least a segment of line E from said second layer; and,

(b) assigning a first non-dimensional attribute to said line A; and,

(c) assigning a second non-dimensional attribute to line E, wherein said first non-dimensional attribute is different from said second non-dimensional attribute.

2. The process of claim 1 wherein said first and second non-dimensional attributes correspond to the group consisting essentially of: roof ridge, roof hip, roof valley, roof flashing edge, perimeter line, roof free edge with a gutter, and a roof free edge without a gutter.

3. The process of claim 1 and further comprising computer processing means for calculating a vector direction corresponding to roof pitch for a roof plane based on at least one of said non-dimensional attributes of common roof plane outline lines and their orientation.

4. The process of claim 1 wherein a deliverable to a client includes an interactive computer file, said interactive computer file including:

(a) length numeric values corresponding to lines A, B and C from said first outline drawing;

(b) a computer area operator to calculate area from at least some of said length numeric values;

(c) at least one user length field enabling a client with said interactive file to override at least one of said length numeric values, where said area operator may automatically recalculate area based on said length field override.

5. The process of claim 4 wherein said interactive computer file includes computer data processing means for proportioning each of the other lines of said first outline in direct proportion to said length field override.

6. The process of claim 1 wherein a deliverable to a client includes an interactive computer file, said interactive computer file including:

at least one user pitch field enabling a client with said interactive file to enter at least one pitch numeric value corresponding to roof pitch of said first roof plane, wherein an area operator may automatically recalculate area of said first roof plane based on said pitch field value.

7. The process of claim 1 and further comprising the act of generating in computer memory at least one adjustment roof plane, wherein said adjustment roof plan may be used to adjust for portions of the roof structure which are not fully visible from said aerial imagery.

8. The process of claim 1 and further comprising the acts of:

Providing at least one computer input field for a user to input first location data generally corresponding to the location of the building;

On said imagery of a region providing a visual marker that is moveable on said computer monitor around said region, said marker initially corresponding to said first location data, wherein said marker may be moved to a final location on top of the building to more precisely identify the location of the building roof structure;

Providing a computer input capable of signaling user-acceptance of the final location of said marker.

9. The process of claim 8 wherein said first location data comprised street address data, and wherein said final location is translated to latitude and longitude coordinates.

10. The process of claim 9 wherein said aerial imagery is from a first imagery database from which said final location is selected and is internet-based imagery having a corresponding street address look up field, and further comprising the acts of:

(a) using said latitude and longitude coordinates to access imagery from a second imagery database; and,

(b) generating in computer memory outline drawings around outlines corresponding to roof planes based on tracing from said imagery from said second imagery database.

11. The process of claim 1 and further comprising computer data processing means that dissects said outlines into substituent triangles and that calculates area of said triangles.

12. The process of claim 1 and further comprising computer data processing means that identifies light and dark contrast between adjacent said roof planes and based thereon automatically generates at least one border line therebetween.

13. The process of claim 6 and further comprising the act of generating in computer memory at least one adjustment roof plane, wherein said adjustment roof plan may be used to adjust for portions of the roof structure which are not fully visible from said aerial imagery.

14. The process of claim 13 and further comprising the acts of:

Providing at least one computer input field for a user to input first location data generally corresponding to the location of the building;

On said imagery of a region providing a visual marker that is moveable on said computer monitor around said region, said marker initially corresponding to said first location data, wherein said marker may be moved to a final location on top of the building to more precisely identify the location of the building roof structure;

Providing a computer input capable of signaling user-acceptance of the final location of said marker.

15. The process of claim 3 and further comprising the acts of:

Providing at least one computer input field for a user to input first location data generally corresponding to the location of the building;

On said imagery of a region providing a visual marker that is moveable on said computer monitor around said region, said marker initially corresponding to said first location data, wherein said marker may be moved to a final location on top of the building to more precisely identify the location of the building roof structure;

Providing a computer input capable of signaling user-acceptance of the final location of said marker.

16. The process of claim 4 and further comprising the acts of:

Providing at least one computer input field for a user to input first location data generally corresponding to the location of the building;

On said imagery of a region providing a visual marker that is moveable on said computer monitor around said region, said marker initially corresponding to said first location data,

wherein said marker may be moved to a final location on top of the building to more precisely identify the location of the building roof structure;

Providing a computer input capable of signaling user-acceptance of the final location of said marker.

17. The process of claim 6 and further comprising the acts of:

Providing at least one computer input field for a user to input first location data generally corresponding to the location of the building;

On said imagery of a region providing a visual marker that is moveable on said computer monitor around said region, said marker initially corresponding to said first location data, wherein said marker may be moved to a final location on top of the building to more precisely identify the location of the building roof structure;

Providing a computer input capable of signaling user-acceptance of the final location of said marker.

18. A process for determining attributes of a roof structure of a real-world three-dimensional building, comprising the acts of:

Viewing on a computer monitor digital aerial imagery of a region including the roof structure, the roof structure having at least a first roof plane and a second roof plane;

generating in computer memory a first outline drawing around a outline corresponding to and visually depicting said first roof plane, said outline including at least three lines, namely A, B and C lines;

wherein a deliverable to a client includes an interactive computer file, said interactive computer file including:

at least one user pitch field enabling a client with said interactive file to enter at least one pitch numeric value corresponding to roof pitch of said first roof plane, wherein an area operator may automatically recalculate area of said first roof plane based on said pitch field value.

19. The process of claim 18 wherein a deliverable to a client includes an interactive computer file, said interactive computer file including:

(a) length numeric values corresponding to lines A, B and C from said first outline drawing;

(b) a computer area operator to calculate area from at least some of said length numeric values;

(c) at least one user length field enabling a client with said interactive file to override at least one of said length numeric values, where said area operator may automatically recalculate area based on said length field override.

20. The process of claim 18 and further comprising the acts of:

Providing at least one computer input field for a user to input first location data generally corresponding to the location of the building;

On said imagery of a region providing a visual marker that is moveable on said computer monitor around said region, said marker initially corresponding to said first location data,

wherein said marker may be moved to a final location on top of the building to more precisely identify the location of the building roof structure;

Providing a computer input capable of signaling user-acceptance of the final location of said marker.

21. The process of claim 18 and further comprising computer processing means for calculating a vector direction corresponding to roof pitch for a roof plane based on at least one of said non-dimensional attributes of common roof plane outline lines and their orientation.

22. The process of claim 18 and further comprising the act of generating in computer memory at least one adjustment roof plane, wherein said adjustment roof plan may be used to adjust for portions of the roof structure which are not fully visible from said aerial imagery.

22. The process of claim 20 and further comprising the act of generating in computer memory at least one adjustment roof plane, wherein said adjustment roof plan may be used to adjust for portions of the roof structure which are not fully visible from said aerial imagery.

23. A process for determining attributes of a roof structure of a real-world three-dimensional building, comprising the acts of:

Providing at least one computer input field for a user to input first location data generally corresponding to the location of the building;

Providing visual access to digital aerial imagery of a region including the roof structure of the building corresponding to said first location data;

On said imagery of a region providing a visual marker that is moveable on said computer monitor around said region, said marker initially corresponding to said first location data, wherein said marker may be moved to a final location on top of the building to more precisely identify the location of the building roof structure;

Providing a computer input capable of signaling user-acceptance of the final location of said marker.

ABSTRACT

The present disclosure shows creating a first layer and a second layer, in computer memory and substantially overlapping at least a segment of line from said first layer with at least a segment of another line from said second layer. A first non-dimensional attribute is different from said second non-dimensional attribute of the two lines. A user length field enabling a client with said interactive file to override at least one of said length numeric values, where said area operator may automatically recalculate area based on said length field override is shown. Also, providing a visual marker that is moveable on said computer monitor around said aerial imagery region, which may be moved, to more precisely identify the location of the building roof structure is shown.

#587745

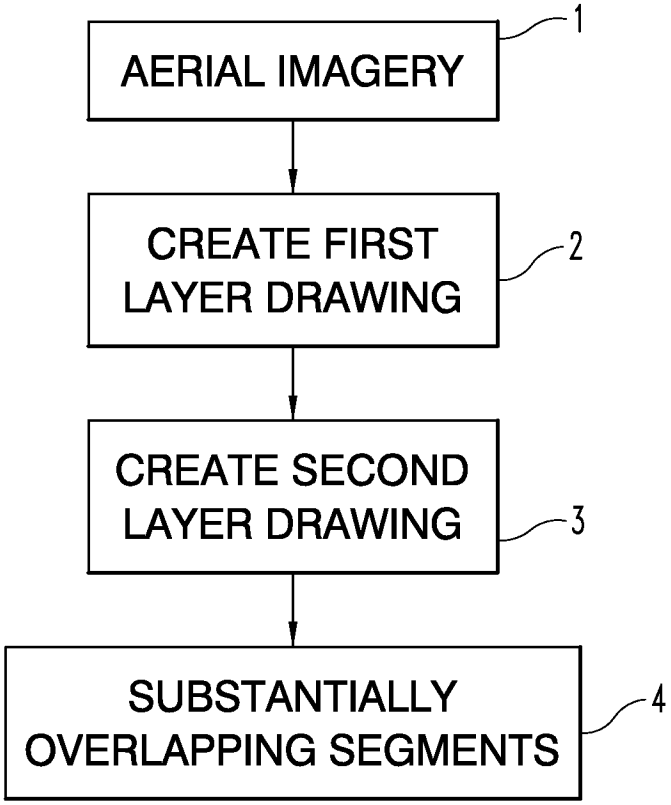

AERIAL IMAGERY
1
CREATE FIRST LAYER DRAWING
2
CREATE SECOND LAYER DRAWING
3
SUBSTANTIALLY OVERLAPPING SEGMENTS
4

Fig. 1

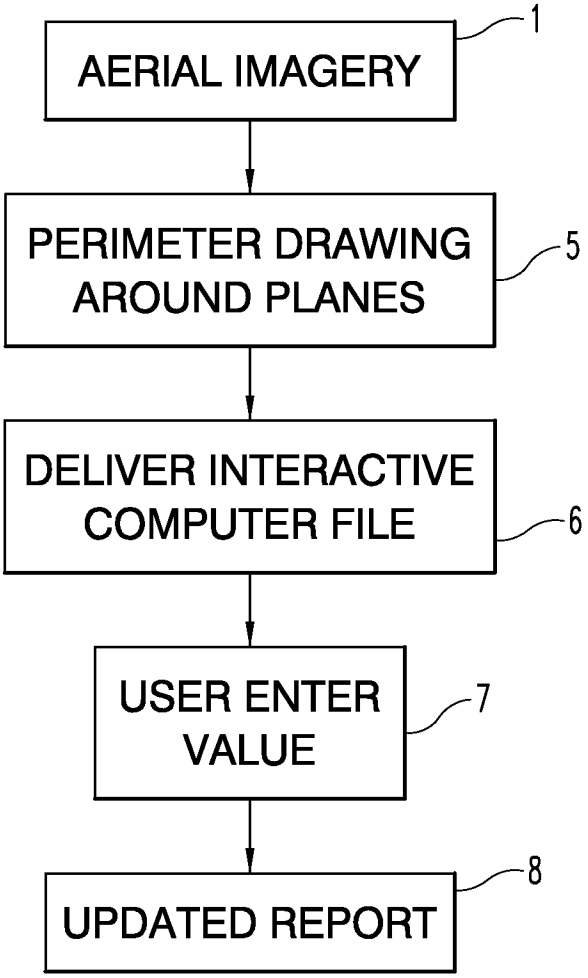

AERIAL IMAGERY
1
PERIMETER DRAWING AROUND PLANES
5
DELIVER INTERACTIVE COMPUTER FILE
6
USER ENTER VALUE
7
UPDATED REPORT
8

Fig. 2

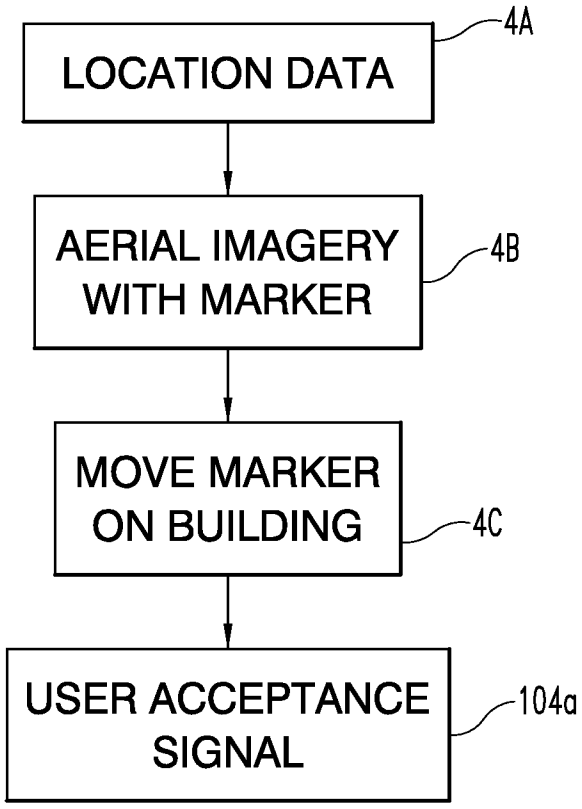

LOCATION DATA
4A
AERIAL IMAGERY WITH MARKER
4B
MOVE MARKER ON BUILDING
4C
USER ACCEPTANCE SIGNAL
104a

Fig. 3

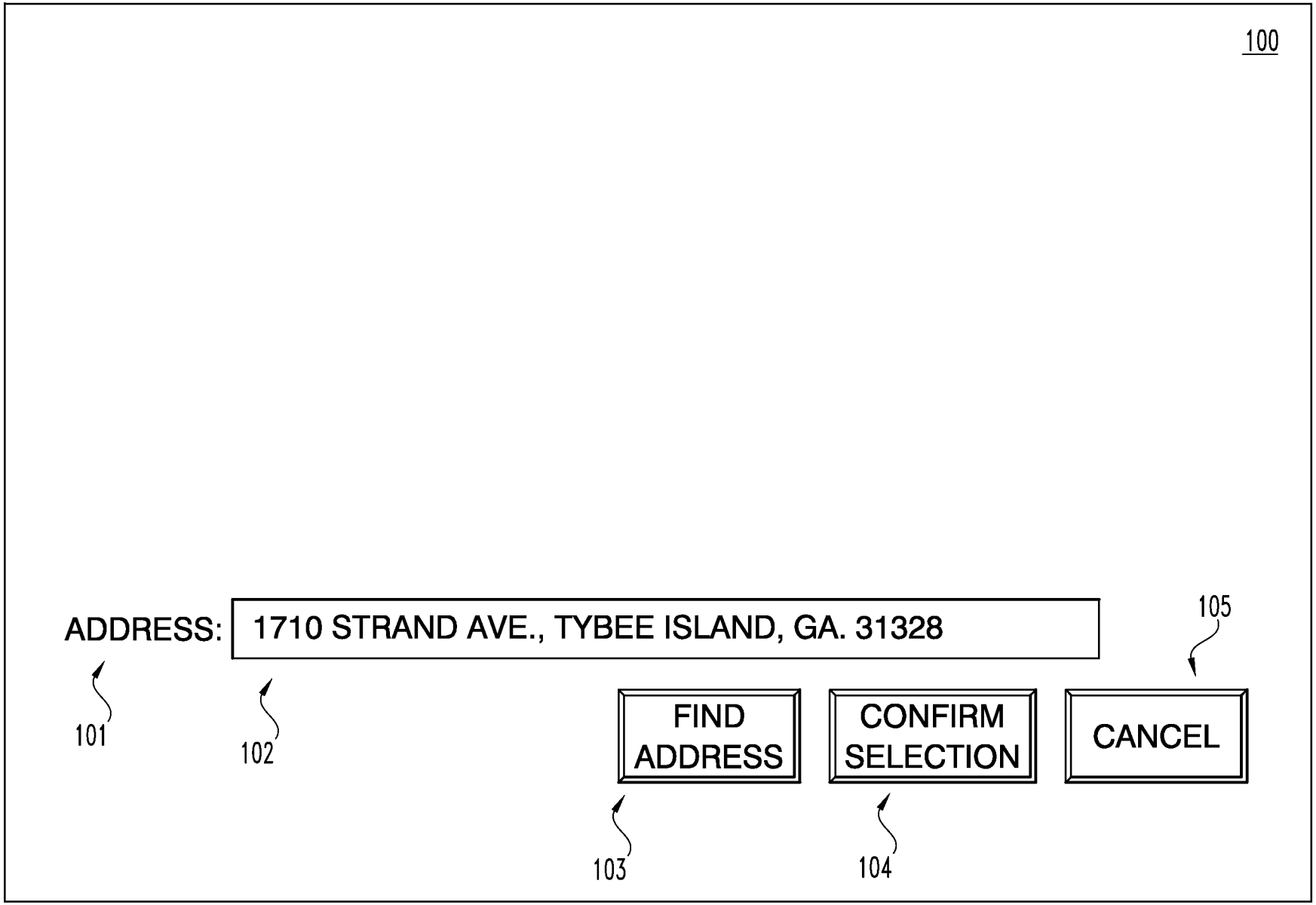

100
ADDRESS:
1710 STRAND AVE., TYBEE ISLAND, GA. 31328
101
102
FIND ADDRESS
CONFIRM SELECTION
CANCEL
105
103
104

Fig. 4A

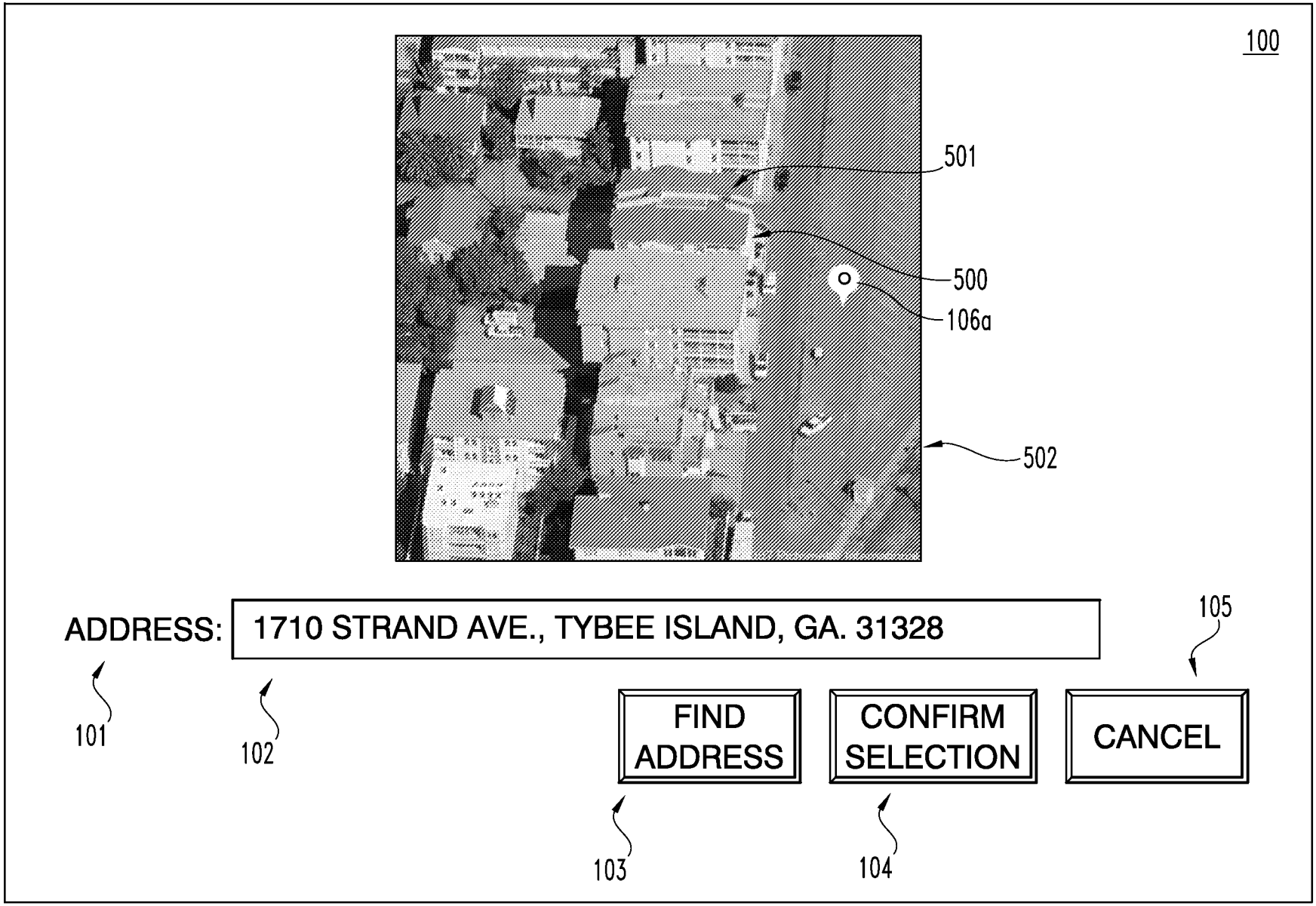

100
501
500
106a
502
ADDRESS:
1710 STRAND AVE., TYBEE ISLAND, GA. 31328
105
101
102
FIND ADDRESS
CONFIRM SELECTION
CANCEL
103
104

Fig. 4B

0053

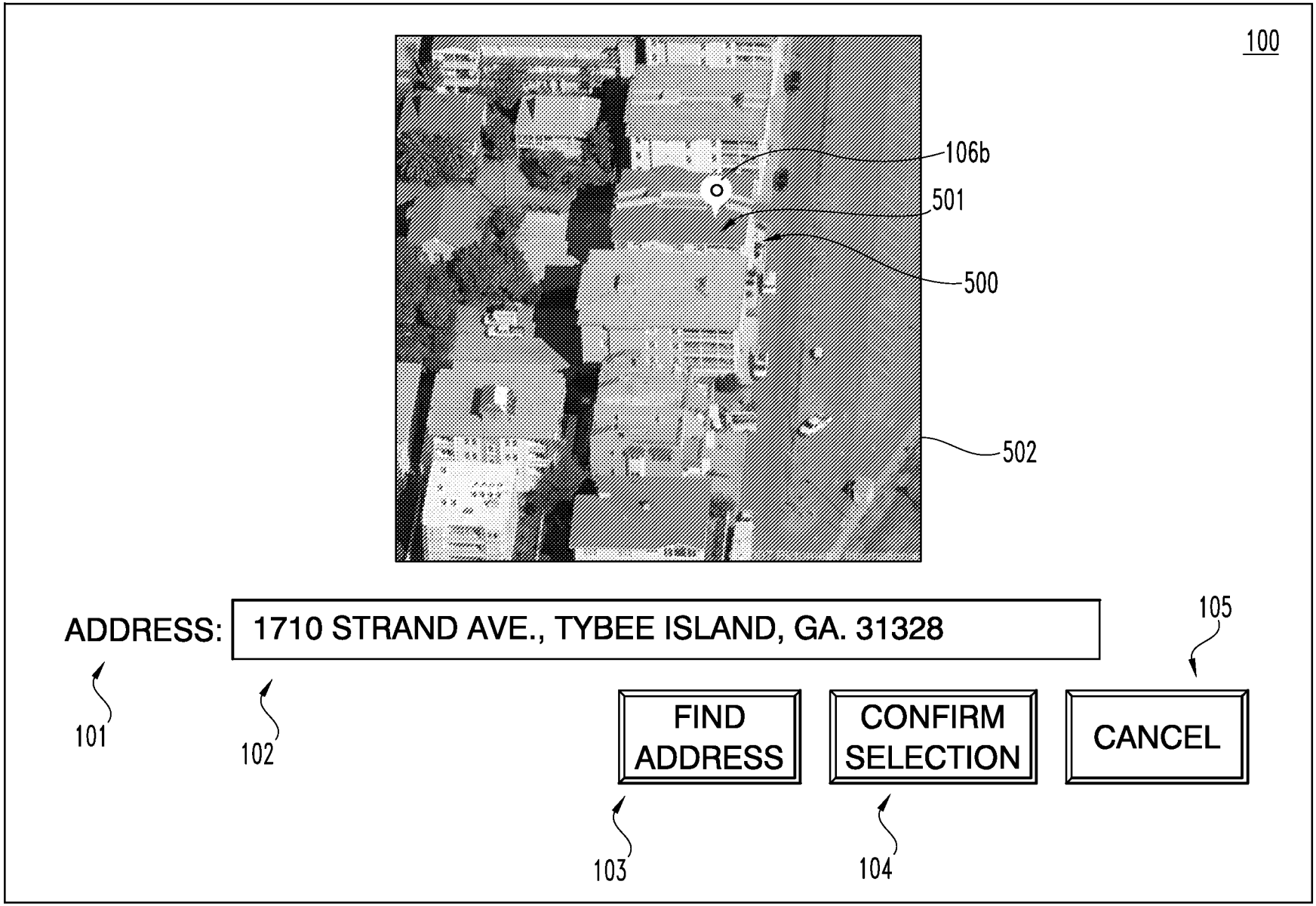

100
106b
501
500
502
ADDRESS:
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105
101
102
FIND ADDRESS
CONFIRM SELECTION
CANCEL
103
104

Fig. 4C

0054

ADDRESS TO BE MEASURED:

1710 STRAND AVE.

108

CITY:

TYBEE ISLAND

109

STATE:

GA.

110

ZIP CODE

31328

111

NUMBER OF PLANES

112

RUSH PROCESSING

113

OPTIONAL:

REFERENCE NUMBER:

114

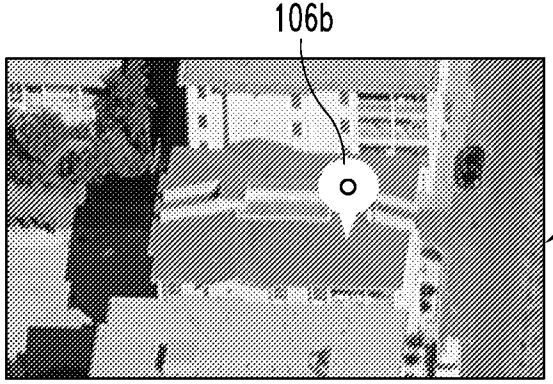
CLAIM NUMBER:

115

116

ADD TO CART

100



I have reviewed the image and confirm my selection is correct.

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38.7492

LONGITUDE REFERENCE:

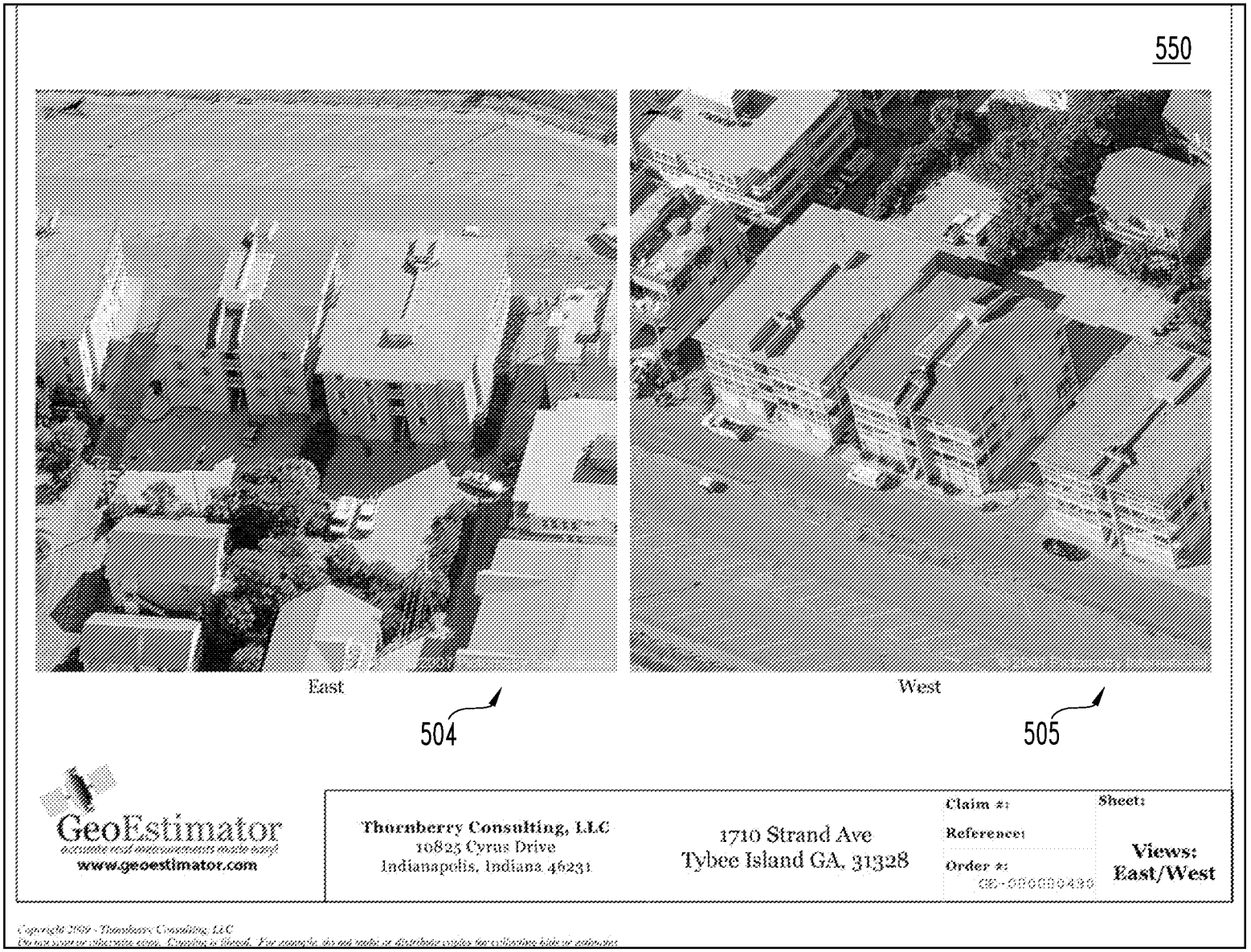
-85.2748

0055

Fig. 4D


550
North
502
South
503
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Order #:
GE-0000000490
Sheet:
Views:
North/South
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Fig. 5A



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Fig. 5B

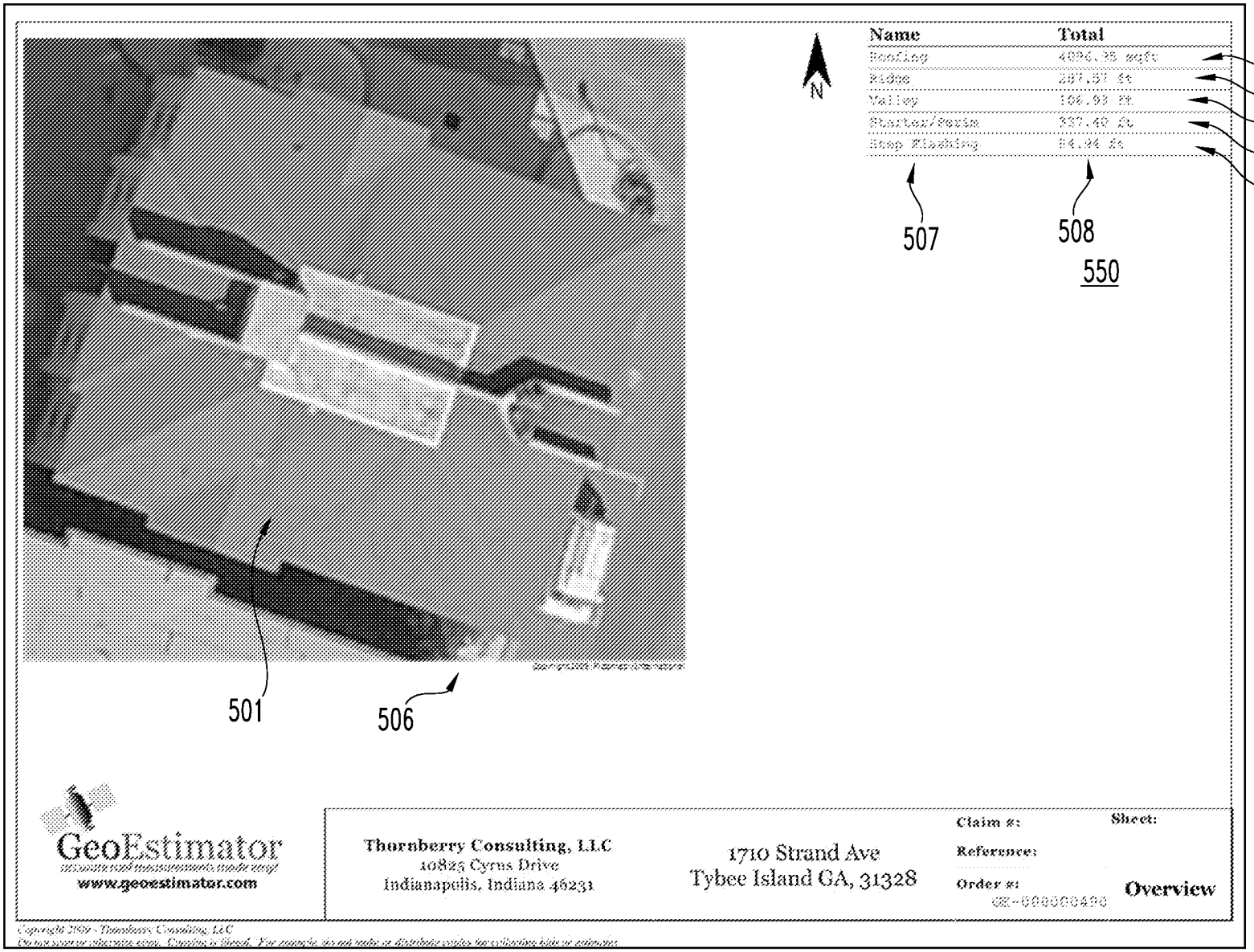

Name
Total
Roofing
4096.25 sqft
Ridge
287.57 ft
Valley
106.93 ft
Starter/Perim
357.40 ft
Step Flashing
84.84 ft
509
510
511
512
513
507
508
550
501
506
N
GeoEstimator
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Sheet:
Reference:
Order #:
Overview

Fig. 5C

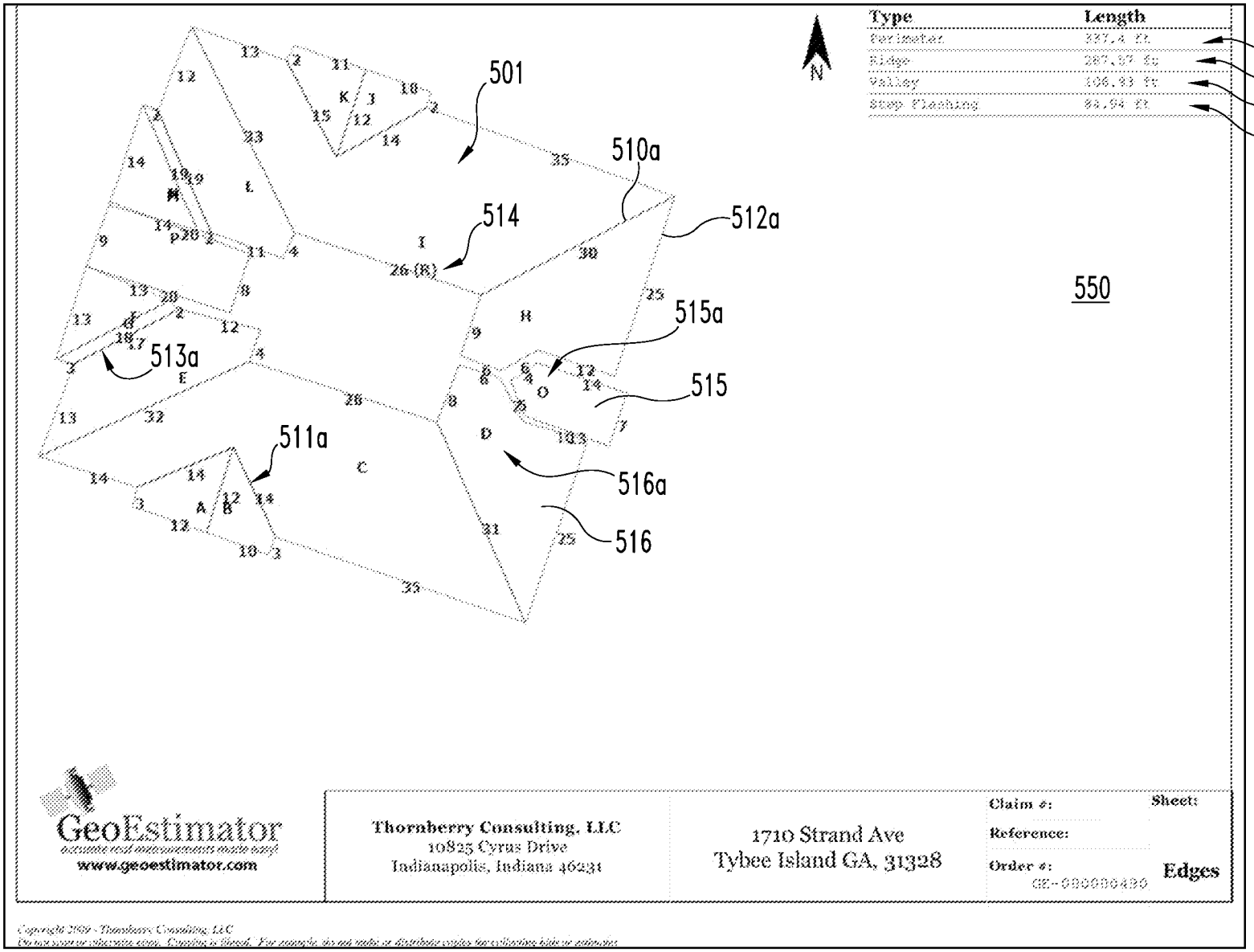
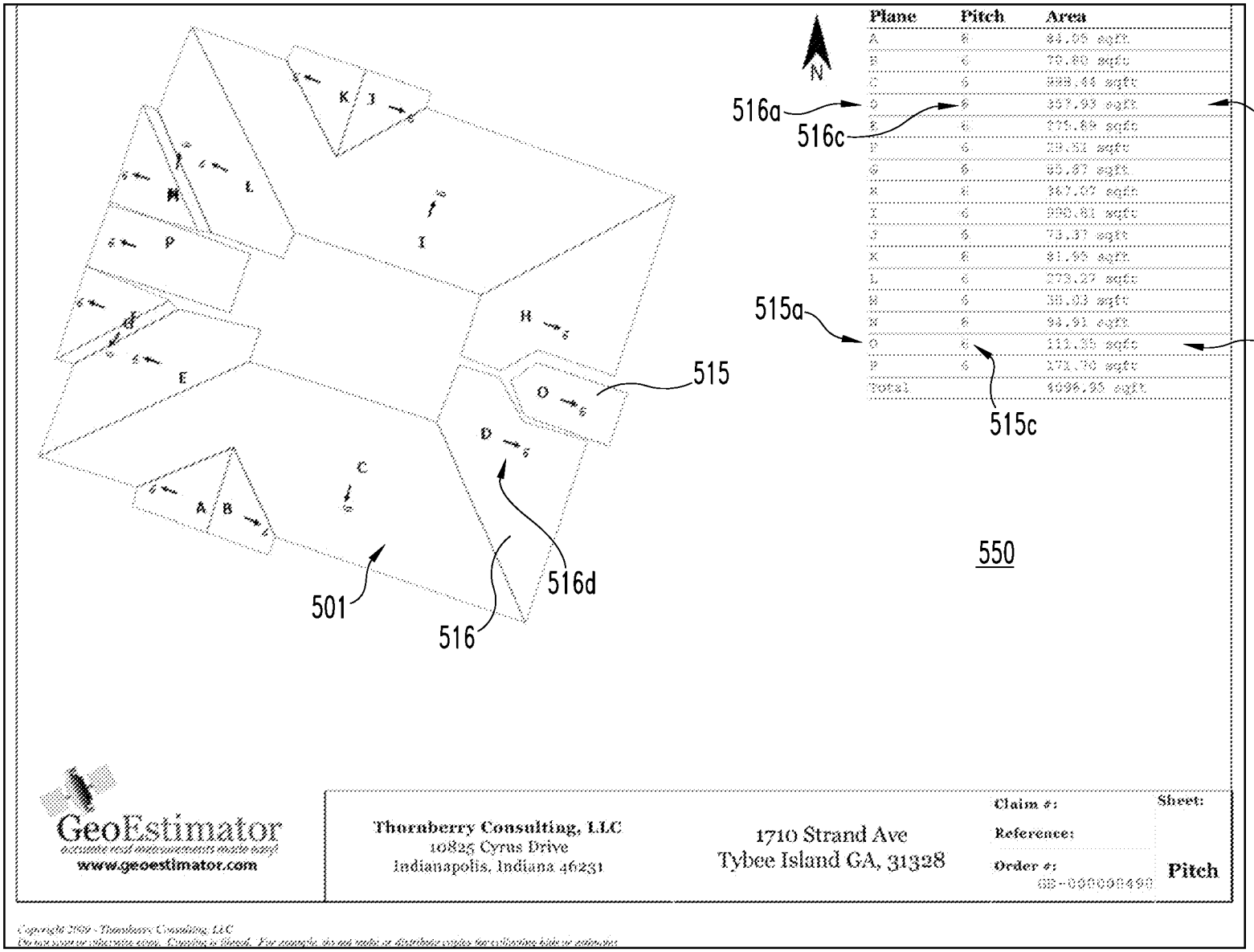

Type
Length
Perimeter
337.4 Ft
Ridge
267.87 Ft
Valley
106.83 Ft
Step Flashing
83.54 Ft
501
510a
512a
514
513a
515a
515
511a
516a
516
550
N
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Tybee Island GA, 31328
Claim #:
Reference:
Order #:
Sheet:
Edges

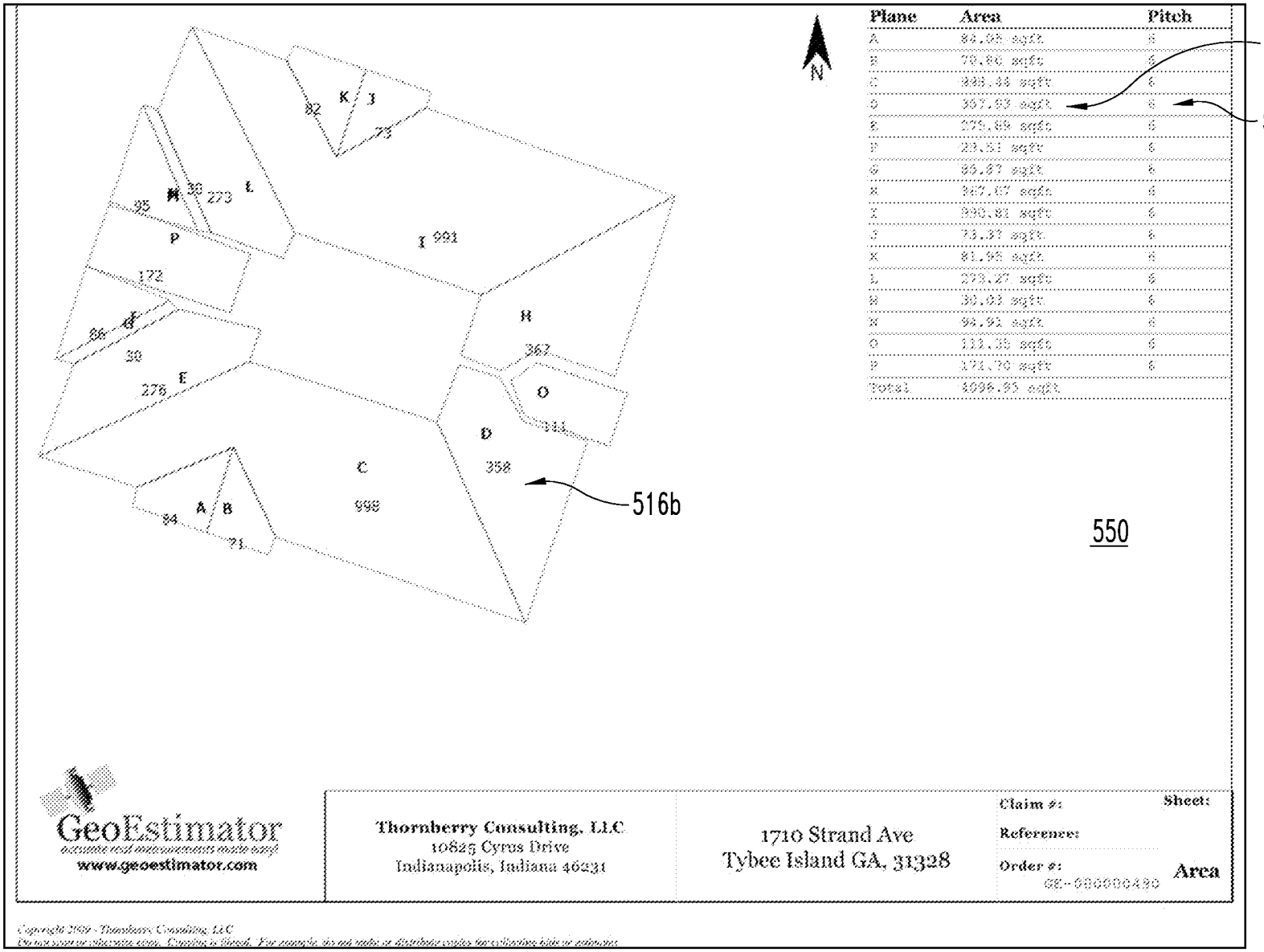
Fig. 5D

0059


Plane Pitch Area
A 6 83.05 sqft
B 6 70.80 sqft
C 6 888.44 sqft
D 6 357.93 sqft
E 6 575.84 sqft
F 6 28.51 sqft
G 6 85.87 sqft
H 6 367.07 sqft
I 6 850.81 sqft
J 6 73.37 sqft
K 6 81.65 sqft
L 6 273.27 sqft
M 6 38.03 sqft
N 6 93.91 sqft
O 6 111.35 sqft
P 6 174.70 sqft
Total 4096.95 sqft
N
516a
516c
516b
515a
515b
515c
515
516d
501
516
550
GeoEstimator
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Claim #:
Reference:
Order #:
Sheet:
Pitch

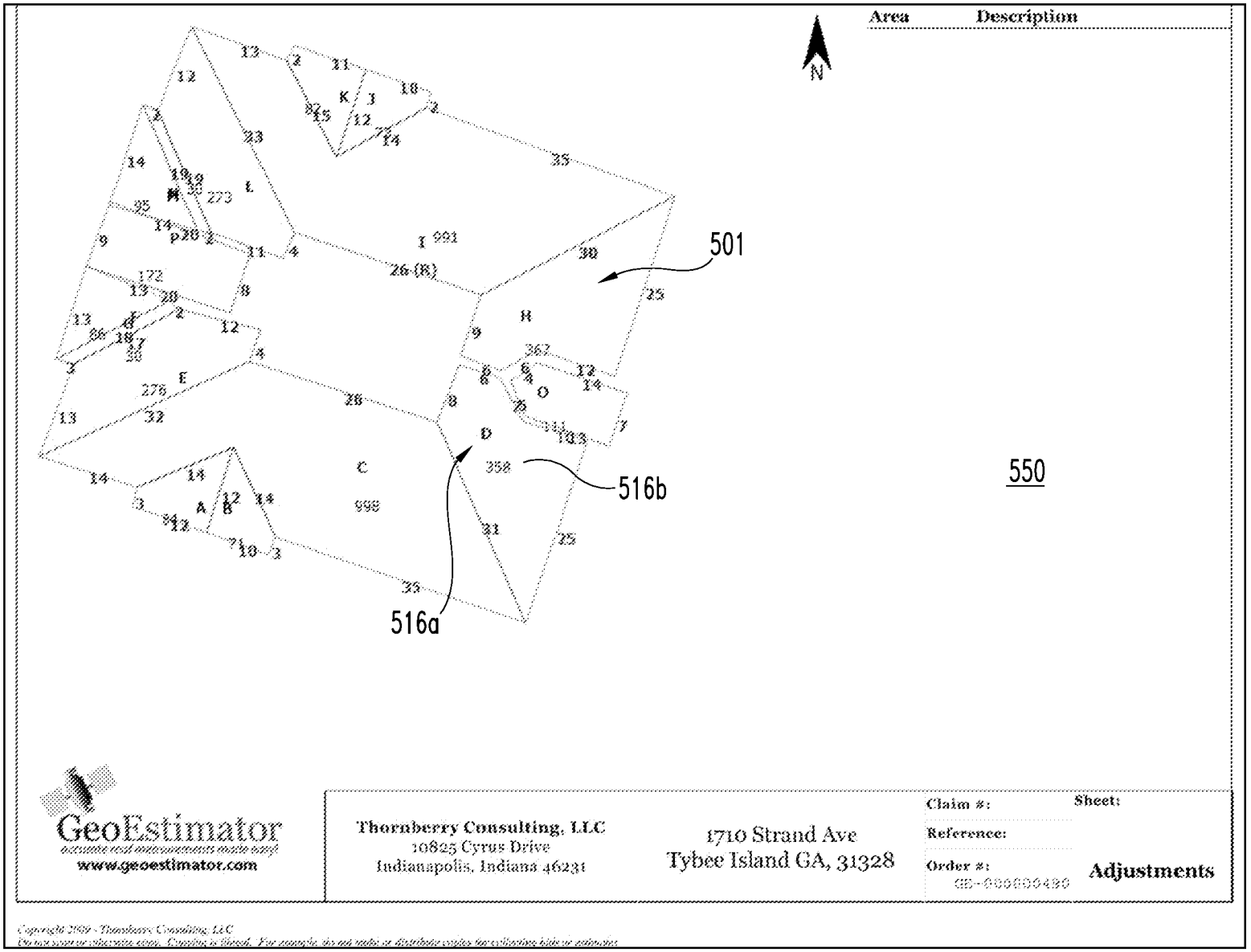
0090

Fig. 5E


Plane Area Pitch
A 84.08 sqft 6
B 79.80 sqft 6
C 888.44 sqft 6
D 357.03 sqft 6
E 279.69 sqft 6
F 28.51 sqft 6
G 85.87 sqft 6
H 347.67 sqft 6
I 990.81 sqft 6
J 75.37 sqft 6
K 81.96 sqft 6
L 273.27 sqft 6
M 30.03 sqft 6
N 94.91 sqft 6
O 133.38 sqft 6
P 171.70 sqft 6
Total 4096.85 sqft
516b
516c
N
550
516b
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Reference:
Order #:
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Sheet:
Area

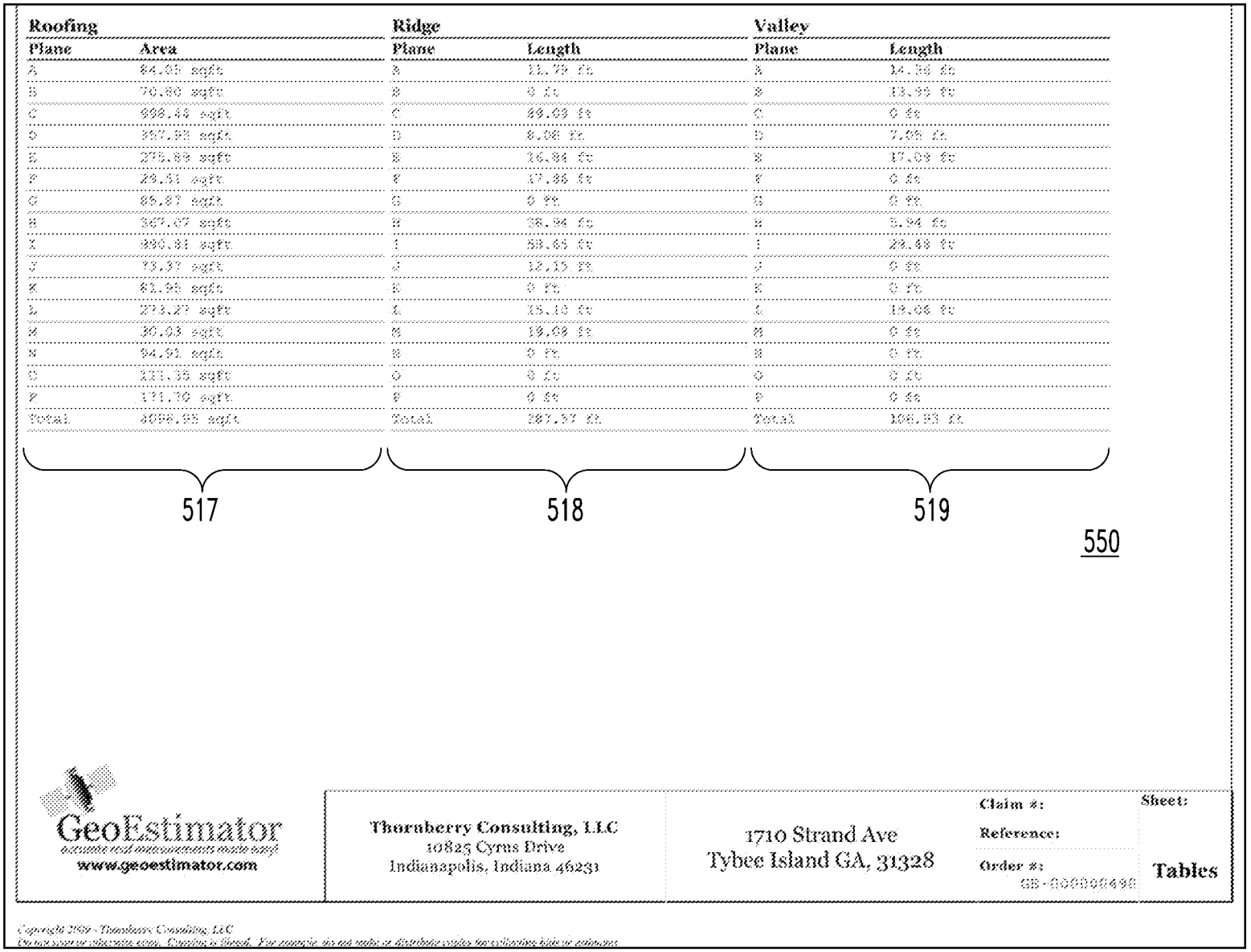
0061

Fig. 5F


Area
Description
N
501
550
516b
516a
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Sheet:
Reference:
Order #:
Adjustments

0062

Fig. 5G



Roofing		Ridge		Valley	
Plane	Area	Plane	Length	Plane	Length
A	84.05 sqft	A	11.79 ft	A	14.56 ft
B	70.80 sqft	B	0 ft	B	13.95 ft
C	998.44 sqft	C	39.09 ft	C	0 ft
D	357.98 sqft	D	8.08 ft	D	7.09 ft
E	275.89 sqft	E	16.84 ft	E	17.09 ft
F	29.51 sqft	F	17.86 ft	F	0 ft
G	85.87 sqft	G	0 ft	G	0 ft
H	367.07 sqft	H	38.94 ft	H	5.94 ft
I	890.81 sqft	I	58.65 ft	I	28.48 ft
J	73.37 sqft	J	12.15 ft	J	0 ft
K	81.95 sqft	K	0 ft	K	0 ft
L	273.27 sqft	L	15.10 ft	L	19.06 ft
M	30.03 sqft	M	19.09 ft	M	0 ft
N	94.91 sqft	N	0 ft	N	0 ft
O	111.35 sqft	O	0 ft	O	0 ft
P	171.70 sqft	P	0 ft	P	0 ft
Total	4098.95 sqft	Total	287.37 ft	Total	106.53 ft

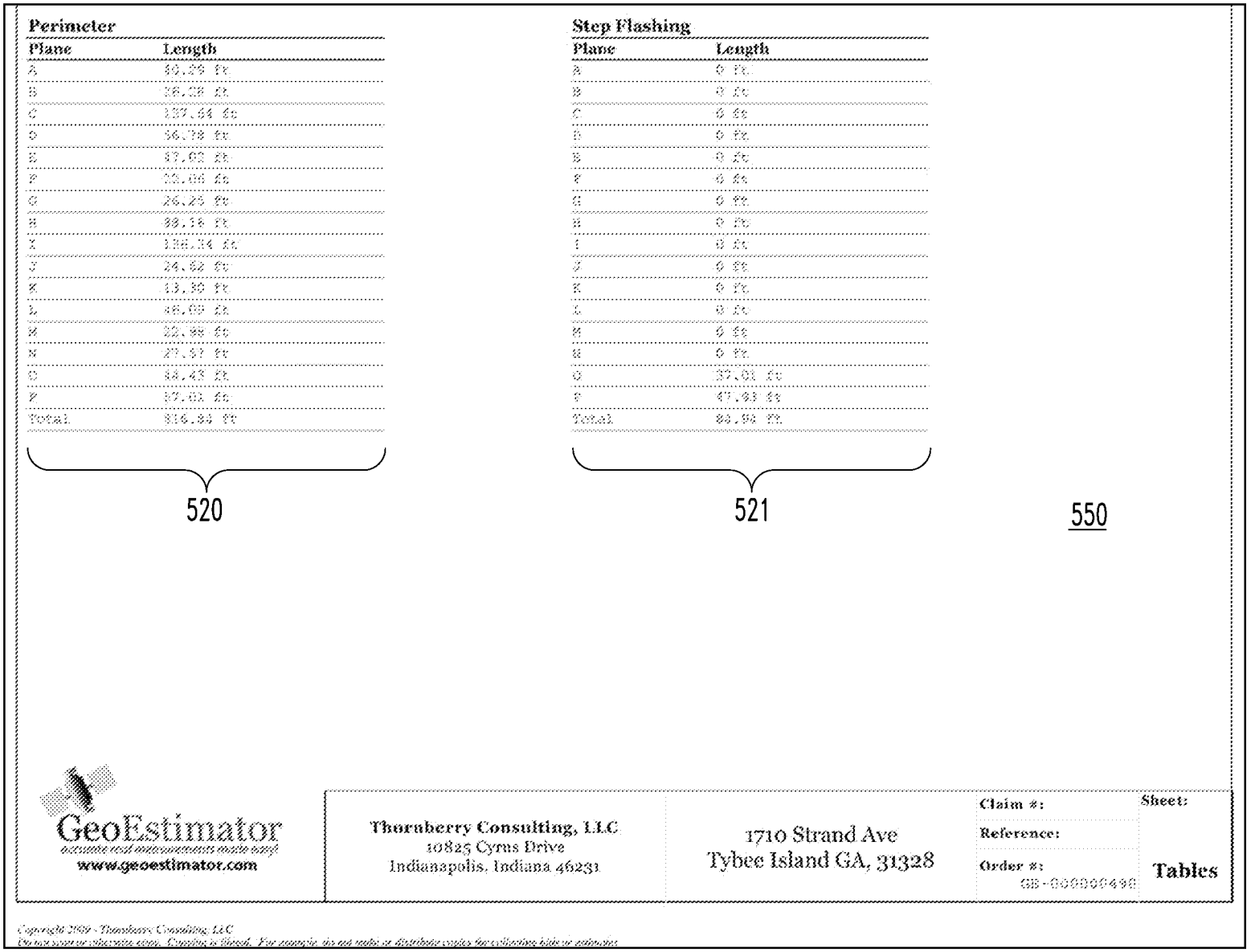
517 518 519

550

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0063

Fig. 5H



Perimeter

Plane	Length
A	80.25 ft
B	36.38 ft
C	137.84 ft
D	56.78 ft
E	37.62 ft
F	33.06 ft
G	26.25 ft
H	88.16 ft
I	136.34 ft
J	24.62 ft
K	13.30 ft
L	46.09 ft
M	32.98 ft
N	27.37 ft
O	84.43 ft
P	37.83 ft
Total	816.84 ft

Step Flashing

Plane	Length
A	0 ft
B	0 ft
C	0 ft
D	0 ft
E	0 ft
F	0 ft
G	0 ft
H	0 ft
I	0 ft
J	0 ft
K	0 ft
L	0 ft
M	0 ft
N	0 ft
O	37.01 ft
P	47.93 ft
Total	84.94 ft

520

521

550

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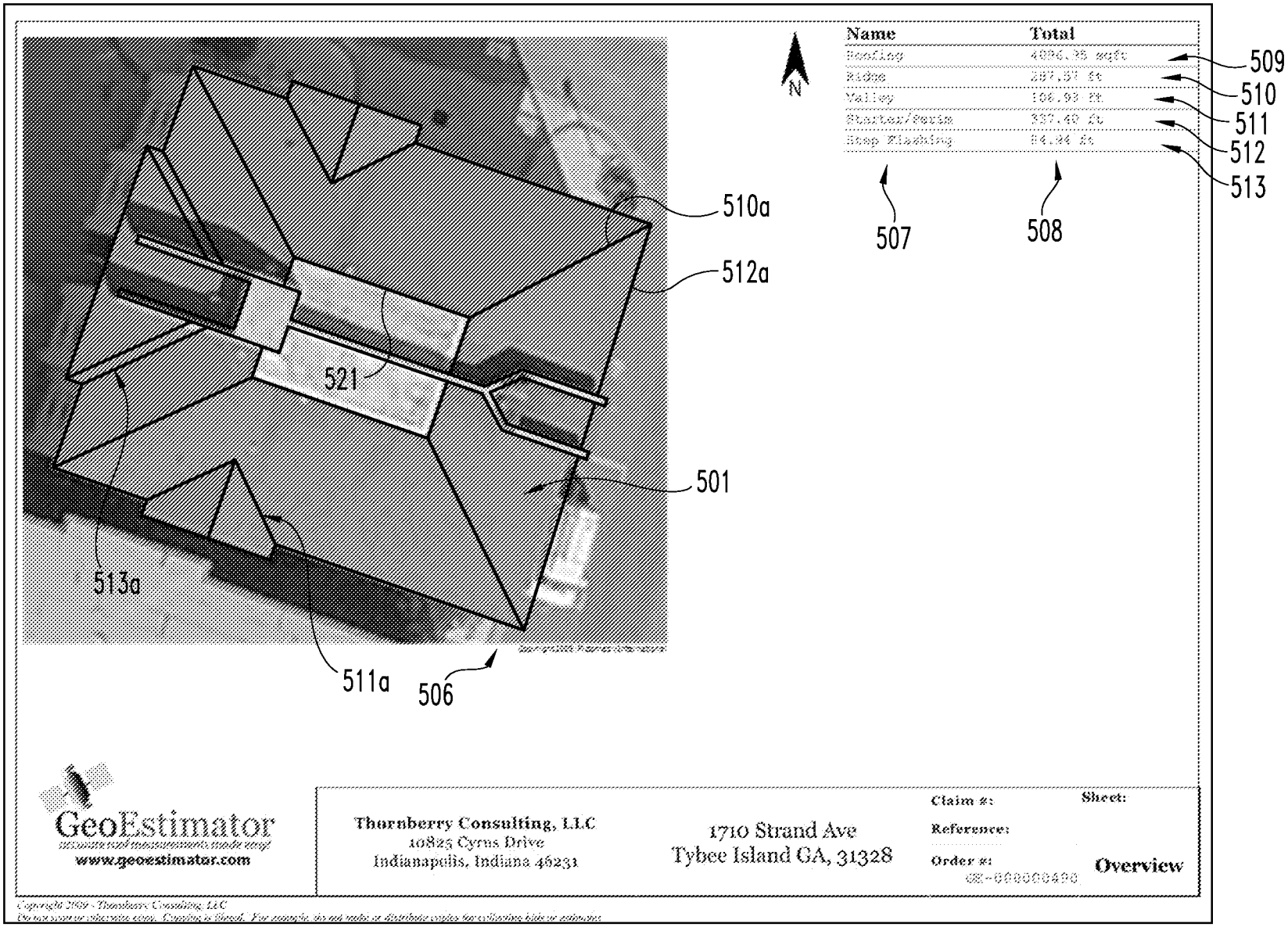
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Sheet: Tables

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0064

Fig. 5I


Name
Total
Roofing
4096.25 sqft
Ridge
287.57 ft
Valley
106.93 ft
Starter/Perim
357.40 ft
Step Flashing
84.84 ft
509
510
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Order #:
Overview

0065

Fig. 6

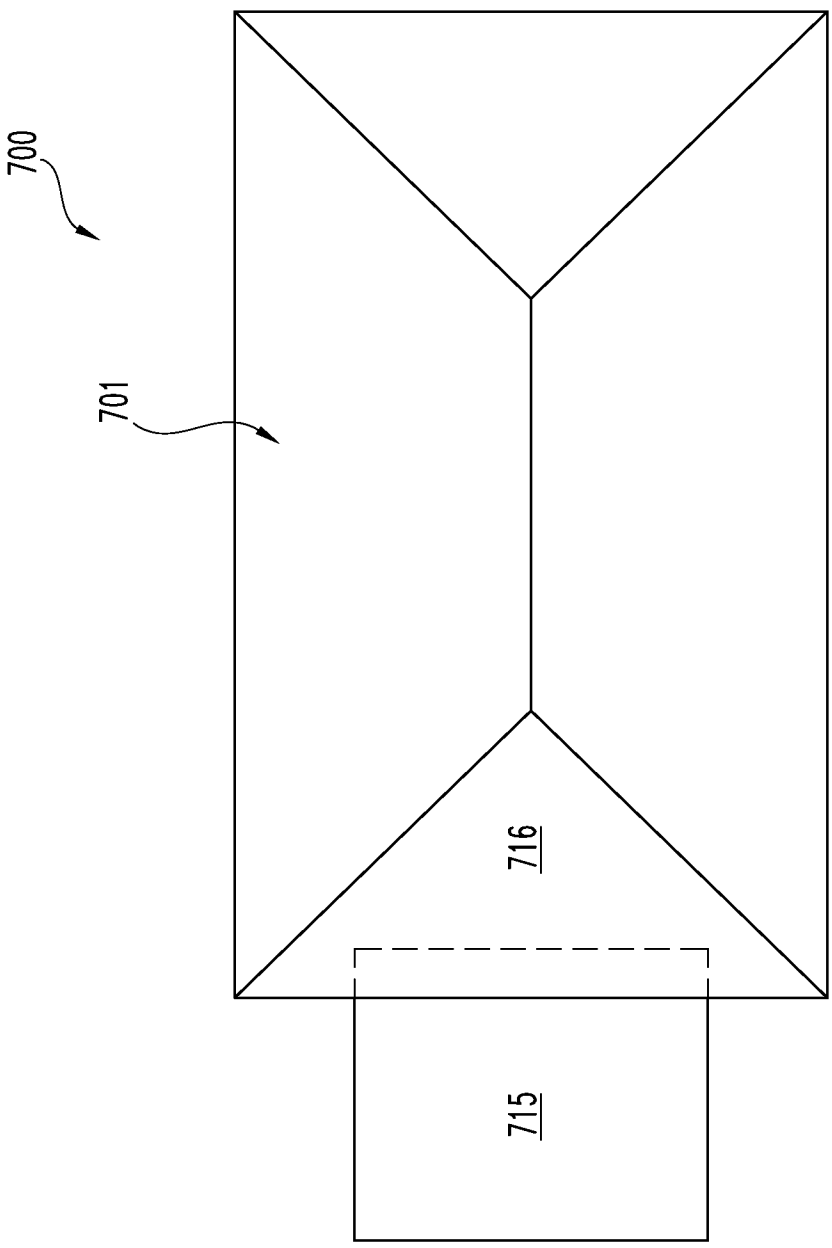
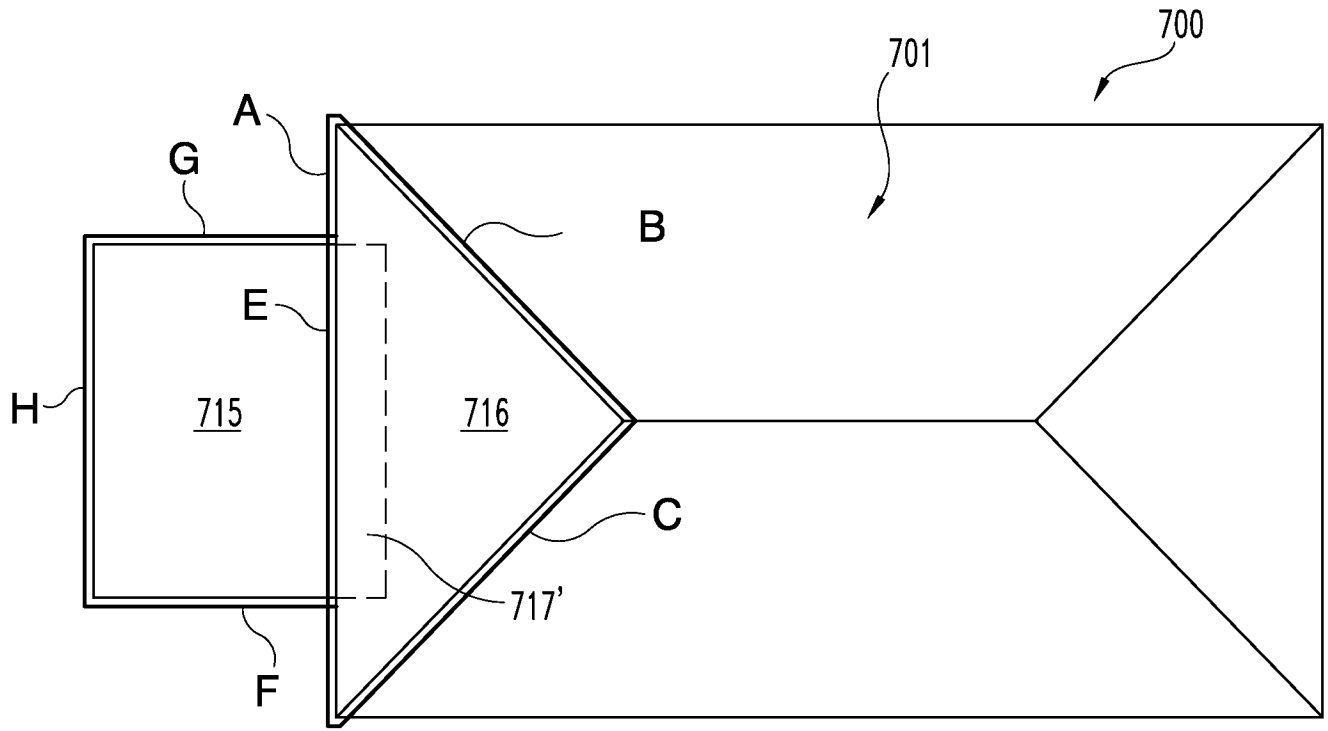
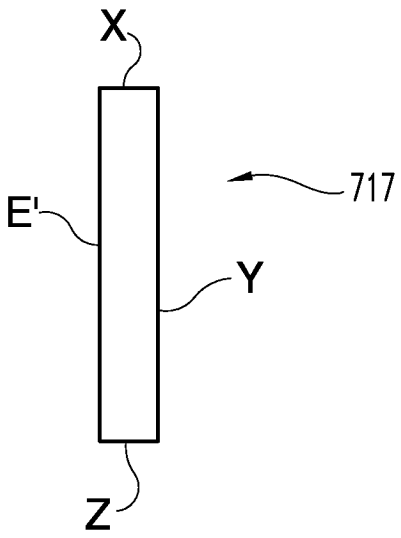


Fig. 7A





721

PLANE	AREA
715	200 SQ. FT.
716	550 SQ. FT.
717	40 SQ. FT.

720

LINE	ATTRIBUTE
A	GUTTER FE
B	RIDGE
C	RIDGE
E	COMMON
F	NO GUTTER
G	NO GUTTER FE
H	NO GUTTER FE
E'	COMMON
X	NO GUTTER FE
Y	FLASHING
Z	NO GUTTER FE

Fig. 7B

0067

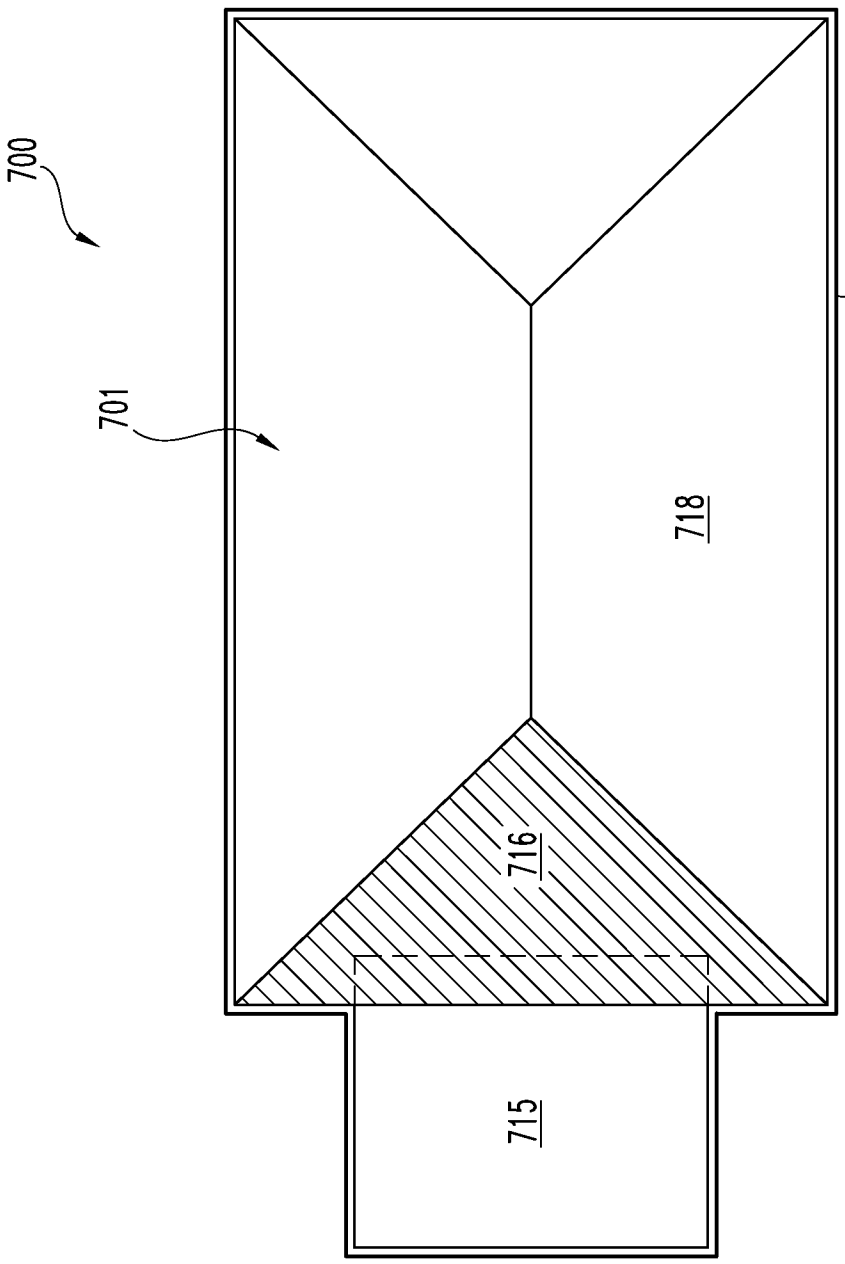


Fig. 7C

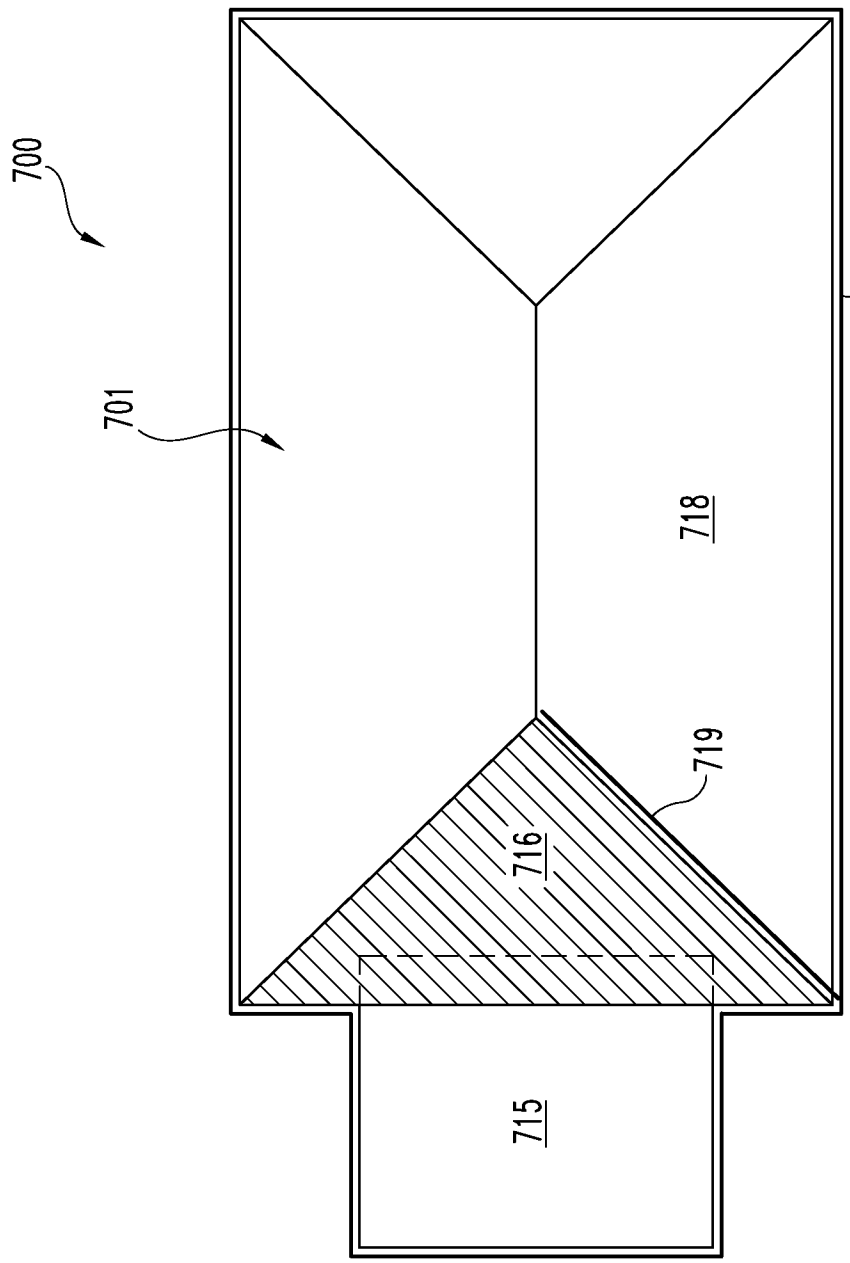


Fig. 7D

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STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: Thornberry Consulting, LLC

Application No./Patent No.: _____ Filed/Issue Date: May 22, 2009

Titled: SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY

Thornberry Consulting, LLC, a Limited Liability Company
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☑ the assignee of the entire right, title, and interest; or

2. ☐ an assignee of less than the entire right, title and interest
(The extent (by percentage) of its ownership interest is_____ %)

in the patent application/patent identified above by virtue of either:

A. ☑ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy therefore is attached.

OR

B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: _____ To: _____
The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

2. From: _____ To: _____
The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

3. From: _____ To: _____
The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

☑ As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (*i.e.*, a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

_____	May 22, 2009
Signature	Date
Daniel J. Lueders	(317) 634-3456
Printed or Typed Name	Telephone Number
Appointed Practitioner to Act on Behalf of Assignee	
Title	

This collection of information is required by 37 CFR 3.73(b). 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 1.11 and 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.

ASSIGNMENT

Dale R. Thornberry of 13890 Wildcat Drive
Carmel, IN 46033
United States;

Chris T. Thornberry of 10825 Cyrus Dr.
Indianapolis, IN 46231
United States;

Mark F. Garringer of 516 E South
Eaton, IN 47338
United States

hereinafter referred to as the "Assignor," either singularly or collectively as appropriate, has made certain inventions in

SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY,

hereinafter referred to as the "Inventions," invented by the Assignor and as, at least in part, disclosed, described, claimed, and/or intended to be in

United States or PCT International Patent Application No. _____,
which was filed on _____,

hereinafter referred to as the "Application." In the event the application number and/or filing date of the Application are not known and/or written above at the time this Assignment is executed, the Assignor hereby authorizes and requests the firm of Woodard, Emhardt, Moriarty, McNett & Henry LLP of 111 Monument Circle, Suite 3700, Indianapolis, Indiana 46204-5137 to insert above the date and/or application number of the Application when officially known.

For good, valuable and sufficient consideration to the Assignor, the receipt of which is hereby acknowledged, the Assignor does hereby sell, assign and transfer unto

Thornberry Consulting, LLC, a Limited Liability Company of Indiana, having a principal place of business at 10825 W. Cyrus Drive, Indianapolis, IN 46231, United States, hereinafter referred to as the "Assignee,"

(i) all of the entire worldwide right, title and interest in, to and under the Inventions,
(ii) all of the entire worldwide right, title and interest, together with all rights of priority, in, to and under the Application,
(iii) all of the entire worldwide right, title and interest, together with all rights of priority, in, to and under the portions, in whole or in part, of any and all applications based on or arising from the Inventions or the Application, including provisional, utility, design, international, plant and petty patent applications, and any and all divisions, continuations, continuations-in-part, substitutes, extensions, re-examinations and reissues thereof, and
(iv) all of the entire worldwide right, title and interest, together with all rights of priority and rights of action for infringement, in, to and under the portions, in whole or in part, of any and all patents based on or arising from the Inventions or the Application, including utility, design, international, plant and petty patent applications, and any and all divisions, continuations, continuations-in-part, substitutes, extensions, re-examinations and reissues thereof,

in all countries, United States and foreign, and under any applicable treaty or convention, which include but are not limited to:

(a) all past, present and future rights and privileges, legal, equitable and otherwise, including, to the extent permissible by law, rights and privileges related to the Assignor's attorney-client relationship,

(b) all past, present and future causes of action, including causes of action for infringement and misappropriation, whether committed or accruing before, on or after the effective date of this assignment, and

(c) all past, present and future remedies for damages and profits,

as related to the Inventions, the Application and the portions, in whole or part, of any and all applications or patents based on or arising from the Inventions or the Application, to be held and enjoyed by the Assignee as fully and entirely as the same would have been held and enjoyed by the Assignor if this assignment and sale had not been made, the above, including items (i) through (iv) and (a) through (c), hereinafter referred to as the "Property and Related Rights."

The Assignor hereby COVENANTS AND WARRANTS that the Assignor has not executed and shall not execute any writing or perform any act whatsoever conflicting with this Assignment. This covenant and warranty includes, but is not limited to, a representation to the Assignee that no assignment, grant, mortgage, license, encumbrance or other agreement affecting any portion, in whole or in part, of the Property and Related Rights has been made to any party by the Assignor, and that the full right and authority to convey the Property and Related Rights as herein expressed is possessed by the Assignor.

The Assignor hereby further COVENANTS AND WARRANTS that the Assignor will, without further consideration or payments to the Assignor but at the Assignee's expense, perform the following as relating to the Inventions, the Application and the portions of any and all applications or patents based on or arising from the Inventions or the Application in all countries, United States and foreign, and under any applicable treaty or convention:

(1) communicate any and all facts and information known to the Assignor respecting the Property and Related Rights to the Assignee and the Assignee's affiliates, legal representatives and successors;

(2) sign, execute and deliver any and all other papers necessary or desirable to perfect the title to all of the entire right and interest, together with all rights of priority in, to and under the Inventions, the Application and the portions, in whole or in part, of any and all applications or patents based on or arising from the Inventions or the Application, including all rightful oaths, declarations, assignments, powers of attorney and other related papers, in and for the use of the Assignee and the Assignee's affiliates, legal representatives and successors;

(3) testify in any legal or quasi-legal proceedings regarding any and all facts known to the Assignor relating to the Property and Related Rights as requested by the Assignee and the Assignee's affiliates, legal representatives and successors;

(4) act in the benefit of the Assignee, including not engaging in any acts resulting in intentional or unintentional waiver of attorney-client privileges, as relating to the Property and Related Rights without express written authorization by the Assignee, and, in the event that there is a waiver of attorney-client privileges, assert that any partial waiver of attorney-client privileges does not constitute a total waiver of attorney-client privileges; and

(5) generally do everything reasonable to aid in securing, maintaining and enforcing proper protection for the Property and Related Rights in the Assignee and the Assignee's affiliates, legal representatives and successors.

The Assignor hereby agrees that any partial waiver of the Assignor's attorney-client rights and privileges as related to the Property and Related Rights, whether inadvertent, willful, past, present or future, will not constitute a total waiver of the Assignor's attorney-client rights and privileges.

The Assignor hereby authorizes and requests the Honorable Commissioner for Patents to issue any aforesaid patent to the Assignee and the Assignee's affiliates, legal representatives and successors.

ASSIGNMENT

This Assignment embodies the complete agreement between the parties and shall be governed and controlled as to validity, enforcement, interpretation, construction, effect and in all other respects by the laws of the United States, and in particular in accordance with the laws of the State of Indiana, without reference to the conflict of laws principles thereof. It is further understood that Assignor consents to the courts of Indiana in connection with any dispute arising under the Assignment.

If any provision of this Assignment shall be ruled invalid or unenforceable by a court of competent jurisdiction, such decision shall not affect the validity or enforceability of the remaining portions of this Assignment, which remaining portions shall continue in full force and effect as if this Assignment had been executed with the invalid portion eliminated.

This Assignment is hereby made effective as of _____, or effective as of the conception date of the Inventions if earlier.

WITNESS Assignor's hand this 12th day of May, 2009.

Dale R. Thornberry

STATE OF Indiana)
) : SS
COUNTY OF Hamilton)

ROBERT D. CLOUD
Hamilton County
My Commission Expires
August 1, 2012

Before me, a Notary Public, in and for the County and State, personally appeared the above-named Assignor, Dale R. Thornberry, who executed the foregoing Assignment in my presence and acknowledged the execution thereof as their free and voluntary act and deed for the uses and purposes therein set forth and expressed.

WITNESS my hand and Notarial Seal this 12th day of May, 2009.

Notary Public: Robert D Cloud

Printed Name: Robert D. Cloud

Resident of Hamilton County

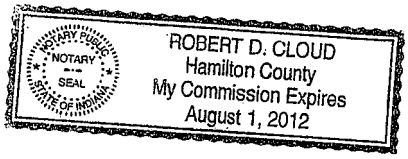
My Commission Expires:
August 1, 2012

ASSIGNMENT

WITNESS Assignor's hand this 12th day of May, 2009.

Chris T. Thornberry

STATE OF Indiana)
) : SS
COUNTY OF Hamilton)



Before me, a Notary Public, in and for the County and State, personally appeared the above-named Assignor, Chris T. Thornberry, who executed the foregoing Assignment in my presence and acknowledged the execution thereof as their free and voluntary act and deed for the uses and purposes therein set forth and expressed.

WITNESS my hand and Notarial Seal this 12th day of May, 2009.

Notary Public: Robert D Cloud

Printed Name: Robert D Cloud

Resident of Hamilton County

My Commission Expires:
August 1, 2012

ASSIGNMENT

WITNESS Assignor's hand this 14 day of May, 2009.

Mark F. Garringer

STATE OF Indiana)
) : SS
COUNTY OF Hamilton)

ROBERT D. CLOUD
Hamilton County
My Commission Expires
August 1, 2012

Before me, a Notary Public, in and for the County and State, personally appeared the above-named Assignor, Mark F. Garringer, who executed the foregoing Assignment in my presence and acknowledged the execution thereof as their free and voluntary act and deed for the uses and purposes therein set forth and expressed.

WITNESS my hand and Notarial Seal this 14th day of May, 2009.

Notary Public: Robert D. Cloud

Printed Name: Robert D Cloud

Resident of Hamilton County

My Commission Expires:
August 1, 2012

PTO/SB/80 (11-08)
Approved for use through 11/30/2011. OMB 0651-0035
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(b).

I hereby appoint:

☑ Practitioners associated with the Customer Number: 30565

OR

☐ Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(b).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(b) to:

☑ The address associated with Customer Number: 30565

OR

☐ Firm or Individual Name			
Address			
City		State	Zip
Country			
Telephone		Email	

Assignee Name and Address:

Thornberry Consulting, LLC
10825 W. Cyrus Drive
Indianapolis, IN 46231

A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature	Dale R Thornberry	Date	5-8-09
Name	Dale Thornberry	Telephone	317-569-1935
Title	member		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. 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 1.11 and 1.14. This collection is estimated to take 3 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.

SCORE Placeholder Sheet for IFW Content

Application Number: 12470984 Document Date: 5/22/2009

The presence of this form in the IFW record indicates that the following document type was received in electronic format on the date identified above. This content is stored in the SCORE database.

- Drawings – Other than Black and White Line Drawings

Since this was an electronic submission, there is no physical artifact folder, no artifact folder is recorded in PALM, and no paper documents or physical media exist. The TIFF images in the IFW record were created from the original documents that are stored in SCORE.

To access the documents in the SCORE database, refer to instructions developed by SIRA.

At the time of document entry (noted above):

- Examiners may access SCORE content via the eDAN interface.
- Other USPTO employees can bookmark the current SCORE URL (http://es/ScoreAccessWeb/).
- External customers may access SCORE content via the Public and Private PAIR interfaces.

Form Revision Date: February 8, 2006

Doc Code: OATH
Document Description: Oath or declaration filed

PTO/SB/01 (10-08)
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DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63)

☑ Declaration Submitted With Initial Filing *OR* ☐ Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16 (f)) required)

Attorney Docket Number	020283-000011
First Named Inventor	Dale Thornberry
COMPLETE IF KNOWN	
Application Number	New
Filing Date	May 22, 2009
Art Unit	
Examiner Name	

I hereby declare that: (1) Each inventor's residence, mailing address, and citizenship are as stated below next to their name; and (2) I believe the inventor(s) named below to be the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY

(Title of the Invention)

the application of which

☑ is attached hereto

OR

☐ was filed on (MM/DD/YYYY) ☐ as United States Application Number or PCT International Application Number ☐ and was amended on (MM/DD/YYYY) ☐ (if applicable).

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

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

Authorization To Permit Access To Application by Participating Offices

☑ If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), and any other intellectual property offices in which a foreign application claiming priority to the above-identified application is filed access to the above-identified patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, or other intellectual property office in which a foreign application claiming priority to the above-identified application is filed to have access to the application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the application-as-filed with respect to: 1) the above-identified application, 2) any foreign application to which the above-identified application claims priority under 35 USC 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the above-identified US application, and 3) any U.S. application from which benefit is sought in the above-identified application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing the Authorization to Permit Access to Application by Participating Offices.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. 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 1.11 and 1.14. This collection is estimated to take 21 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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DECLARATION — Utility or Design Patent Application

Claim of Foreign Priority Benefits

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached? YES	NO
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐

☐ Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

PTO/SB/01 (10-08)
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DECLARATION — Utility or Design Patent Application

Direct all correspondence to:	☑ The address associated with Customer Number:	30565	OR ☐	Correspondence address below

Name		
Address		
City	State	ZIP
Country	Telephone	Email

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available. Petitioner/applicant is advised that documents which form the record of a patent application (such as the PTO/SB/01) are placed into the Privacy Act system of records DEPARTMENT OF COMMERCE, COMMERCE-PAT-7, System name: *Patent Application Files.* Documents not retained in an application file (such as the PTO-2038) are placed into the Privacy Act system of COMMERCE/PAT-TM-10, System name: *Deposit Accounts and Electronic Funds Transfer Profiles.*

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 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

NAME OF SOLE OR FIRST INVENTOR:	☐ A petition has been filed for this unsigned inventor
Given Name (first and middle [if any]): Dale R.	Family Name or Surname: Thomberry
Inventor's Signature:	Date:

Residence: City	State	Country	Citizenship
Carmel	IN	United States	USA

Mailing Address: 13890 Wildcat Dr.			
City: Carmel	State: IN	Zip: 46033	Country: United States

☐ Additional inventors or a legal representative are being named on the _____ supplemental sheet(s) PTO/SB/02A or 02LR attached hereto.

PTO/SB/02A (07-07)
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DECLARATION

ADDITIONAL INVENTOR(S)
Supplemental Sheet
Page _____ of _____

Name of Additional Joint Inventor, if any:	☐ A petition has been filed for this unsigned inventor		
Given Name (first and middle (if any))	Family Name or Surname		
Chris T.	Thornberry		
Inventor's Signature Chris T. Thornberry			Date 5/21/09
Indianapolis Residence: City	IN State	USA Country	USA Citizenship
10825 Cyrus Dr. Mailing Address			
Indianapolis City	IN State	46231 Zip	USA Country

Name of Additional Joint Inventor, if any:	☐ A petition has been filed for this unsigned inventor		
Given Name (first and middle (if any))	Family Name or Surname		
Mark F.	Garringer		
Inventor's Signature Mark Garringer			Date 5/21/09
Eaton Residence: City	IN State	USA Country	USA Citizenship
516 E. South Mailing Address			
Eaton City	IN State	47338 Zip	USA Country

Name of Additional Joint Inventor, if any:	☐ A petition has been filed for this unsigned inventor		
Given Name (first and middle (if any))	Family Name or Surname		
Inventor's Signature			Date
Residence: City	State	Country	Citizenship
Mailing Address			
City	State	Zip	Country

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. 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 1.11 and 1.14. This collection is estimated to take 21 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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PTO/SB/06 (12-04)

Filing Date: 05/22/09

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PATENT APPLICATION FEE DETERMINATION RECORD
Substitute for Form PTO-875

Application or Docket Number: 12/470,984

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	82		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	270		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	110		N/A	
18 (37 CFR 1.16(i))	24	4	X$ 25	104	OR	X$50	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3 minus 3 =	* 0	105	0		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 $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))			180			360	
			TOTAL	566		TOTAL	0

* If the difference in column 1 is less than zero, enter "0" in column 2.

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 =		OR	x =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
Application Size Fee (37 CFR 1.16(s))							OR		
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					N/A		OR	N/A	
					TOTAL ADD'T FEE		OR	TOTAL ADD'T FEE	

AMENDMENT B

	(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 =		OR	x =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
Application Size Fee (37 CFR 1.16(s))							OR		
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					N/A		OR	N/A	
					TOTAL ADD'T FEE		OR	TOTAL ADD'T 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.

Electronic Acknowledgement Receipt

EFS ID:	5386113
Application Number:	12470984
International Application Number:	
Confirmation Number:	4950
06/02/2009 MTEKLEMI 00000011 233030 12470984 01 FC:2202 26.00 DA **Title of Invention:**	SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY
First Named Inventor/Applicant Name:	Dale R. Thornberry
Customer Number:	30565
Filer:	Daniel Lueders/Ruth Rogers
Filer Authorized By:	Daniel Lueders
Attorney Docket Number:	020283-000011
Receipt Date:	22-MAY-2009
Filing Date:	
Time Stamp:	15:33:59
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$540
RAM confirmation Number	1819
Deposit Account	233030
Authorized User	LUEDERS,DANIEL J.

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 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

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
12/470,984	05/22/2009	2624	566	020283-000011	24	3

CONFIRMATION NO. 4950

30565
WOODARD, EMHARDT, MORIARTY, MCNETT & HENRY LLP
111 MONUMENT CIRCLE, SUITE 3700
INDIANAPOLIS, IN 46204-5137

FILING RECEIPT



Date Mailed: 06/04/2009

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)

Dale R. Thornberry, Carmel, IN;
Chris T. Thornberry, Indianapolis, IN;
Mark F. Garringer, Eaton, IN;

Power of Attorney: The patent practitioners associated with Customer Number 30565

Domestic Priority data as claimed by applicant

Foreign Applications

Permission to Access - A proper **Authorization to Permit Access to Application by Participating Offices** (PTO/SB/39 or its equivalent) has been received by the USPTO.

If Required, Foreign Filing License Granted: 06/01/2009

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 12/470,984**

Projected Publication Date: 11/25/2010

Non-Publication Request: No

Early Publication Request: No
**** SMALL ENTITY ****

Title

SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY

Preliminary Class

382

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.

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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).

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Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

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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.

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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).

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UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/470,984	05/22/2009	Dale R. Thornberry	020283-000011

CONFIRMATION NO. 4950

30565
WOODARD, EMHARDT, MORIARTY, MCNETT & HENRY LLP
111 MONUMENT CIRCLE, SUITE 3700
INDIANAPOLIS, IN 46204-5137

POA ACCEPTANCE LETTER

OC000000036249209

Date Mailed: 06/04/2009

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 05/22/2009.

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.

/dgela/

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	12/470,984
Confirmation No.:	4950
First-Named Inventor:	Dale R. Thornberry
Filing Date:	May 22, 2009
Group Art Unit:	2624
Examiner:	Unassigned
Attorney Docket No.:	020283-000011
Title:	SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY

PRELIMINARY AMENDMENT

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

Commissioner:

Please consider and enter the following preliminary amendments and remarks in the above-mentioned patent application. As presently amended, this application includes 33 total claims. As originally filed this application paid for 23 total claims. Included herewith is the required fee for 10 additional claims. No other fees are believed to be required with this Amendment, however, the Director is hereby authorized to charge any fees under 37 CFR §§ 1.16 and 1.17 which may be required by this paper to Deposit Account No. 23-3030.

Contents:

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Remarks	Page 13

AMENDMENTS TO THE CLAIMS

1. (Original) A process for determining attributes of a roof structure of a real-world three-dimensional building, comprising the acts of:

Viewing on a computer monitor digital aerial imagery of a region including the roof structure, the roof structure having at least a first roof plane and a second roof plane;

Creating an electronic drawing first layer over said imagery;

Creating an electronic drawing second layer over said imagery;

In creating said first layer, generating in computer memory a first outline drawing around a outline corresponding to and visually depicting said first roof plane, said outline including at least three lines, namely A, B and C lines;

In creating said second layer, generating in computer memory a second outline drawing around a outline corresponding to and visually depicting said second roof plane, said outline including at least three lines, namely E, F and G lines;

In creating said first layer and said second layer, in computer memory:

(a) substantially overlapping at least a segment of line A from said first layer with at least a segment of line E from said second layer; and,

(b) assigning a first non-dimensional attribute to said line A; and,

(c) assigning a second non-dimensional attribute to line E, wherein said first non-dimensional attribute is different from said second non-dimensional attribute.

2. (Original) The process of claim 1 wherein said first and second non-dimensional attributes correspond to the group consisting essentially of: roof ridge, roof hip, roof valley, roof flashing edge, perimeter line, roof free edge with a gutter, and a roof free edge without a gutter.

3. (Original) The process of claim 1 and further comprising computer processing means for calculating a vector direction corresponding to roof pitch for a roof plane based on at least one of said non-dimensional attributes of common roof plane outline lines and their orientation.

4. (Original) The process of claim 1 wherein a deliverable to a client includes an interactive computer file, said interactive computer file including:

(a) length numeric values corresponding to lines A, B and C from said first outline drawing;

(b) a computer area operator to calculate area from at least some of said length numeric values;

(c) at least one user length field enabling a client with said interactive file to override at least one of said length numeric values, where said area operator may automatically recalculate area based on said length field override.

5. (Original) The process of claim 4 wherein said interactive computer file includes computer data processing means for proportioning each of the other lines of said first outline in direct proportion to said length field override.

6. (Original) The process of claim 1 wherein a deliverable to a client includes an interactive computer file, said interactive computer file including:

at least one user pitch field enabling a client with said interactive file to enter at least one pitch numeric value corresponding to roof pitch of said first roof plane, wherein an area operator may automatically recalculate area of said first roof plane based on said pitch field value.

7. (Original) The process of claim 1 and further comprising the act of generating in computer memory at least one adjustment roof plane, wherein said adjustment roof plan may be used to adjust for portions of the roof structure which are not fully visible from said aerial imagery.

8. (Original) The process of claim 1 and further comprising the acts of:

Providing at least one computer input field for a user to input first location data generally corresponding to the location of the building;

On said imagery of a region providing a visual marker that is moveable on said computer monitor around said region, said marker initially corresponding to said first location data, wherein said marker may be moved to a final location on top of the building to more precisely identify the location of the building roof structure;

Providing a computer input capable of signaling user-acceptance of the final location of said marker.

9. (Original) The process of claim 8 wherein said first location data comprised street address data, and wherein said final location is translated to latitude and longitude coordinates.

10. (Original) The process of claim 9 wherein said aerial imagery is from a first imagery database from which said final location is selected and is internet-based imagery having a corresponding street address look up field, and further comprising the acts of:

(a) using said latitude and longitude coordinates to access imagery from a second imagery database; and,

(b) generating in computer memory outline drawings around outlines corresponding to roof planes based on tracing from said imagery from said second imagery database.

11. (Original) The process of claim 1 and further comprising computer data processing means that dissects said outlines into substituent triangles and that calculates area of said triangles.

12. (Original) The process of claim 1 and further comprising computer data processing means that identifies light and dark contrast between adjacent said roof planes and based thereon automatically generates at least one border line therebetween.

13. (Original) The process of claim 6 and further comprising the act of generating in computer memory at least one adjustment roof plane, wherein said adjustment roof plan may be used to adjust for portions of the roof structure which are not fully visible from said aerial imagery.

14. (Original) The process of claim 13 and further comprising the acts of:

Providing at least one computer input field for a user to input first location data generally corresponding to the location of the building;

On said imagery of a region providing a visual marker that is moveable on said computer monitor around said region, said marker initially corresponding to said first location data, wherein said marker may be moved to a final location on top of the building to more precisely identify the location of the building roof structure;

Providing a computer input capable of signaling user-acceptance of the final location of said marker.

15. (Original) The process of claim 3 and further comprising the acts of:

Providing at least one computer input field for a user to input first location data generally corresponding to the location of the building;

On said imagery of a region providing a visual marker that is moveable on said computer monitor around said region, said marker initially corresponding to said first location data, wherein said marker may be moved to a final location on top of the building to more precisely identify the location of the building roof structure;

Providing a computer input capable of signaling user-acceptance of the final

location of said marker.

16. (Original) The process of claim 4 and further comprising the acts of:

Providing at least one computer input field for a user to input first location data generally corresponding to the location of the building;

On said imagery of a region providing a visual marker that is moveable on said computer monitor around said region, said marker initially corresponding to said first location data, wherein said marker may be moved to a final location on top of the building to more precisely identify the location of the building roof structure;

Providing a computer input capable of signaling user-acceptance of the final location of said marker.

17. (Original) The process of claim 6 and further comprising the acts of:

Providing at least one computer input field for a user to input first location data generally corresponding to the location of the building;

On said imagery of a region providing a visual marker that is moveable on said computer monitor around said region, said marker initially corresponding to said first location data, wherein said marker may be moved to a final location on top of the building to more precisely identify the location of the building roof structure;

Providing a computer input capable of signaling user-acceptance of the final location of said marker.

18. (Original) A process for determining attributes of a roof structure of a real-world three-dimensional building, comprising the acts of:

Viewing on a computer monitor digital aerial imagery of a region including the roof structure, the roof structure having at least a first roof plane and a second roof plane;

generating in computer memory a first outline drawing around a outline corresponding to and visually depicting said first roof plane, said outline including at least three lines, namely A, B and C lines;

wherein a deliverable to a client includes an interactive computer file, said interactive computer file including:

at least one user pitch field enabling a client with said interactive file to enter at least one pitch numeric value corresponding to roof pitch of said first roof plane, wherein an area operator may automatically recalculate area of said first roof plane based on said pitch field value.

19. (Original) The process of claim 18 wherein a deliverable to a client includes an interactive computer file, said interactive computer file including:

(a) length numeric values corresponding to lines A, B and C from said first outline drawing;

(b) a computer area operator to calculate area from at least some of said length numeric values;

(c) at least one user length field enabling a client with said interactive file to override at least one of said length numeric values, where said area operator may

automatically recalculate area based on said length field override.

20. (Original) The process of claim 18 and further comprising the acts of:

Providing at least one computer input field for a user to input first location data generally corresponding to the location of the building;

On said imagery of a region providing a visual marker that is moveable on said computer monitor around said region, said marker initially corresponding to said first location data, wherein said marker may be moved to a final location on top of the building to more precisely identify the location of the building roof structure;

Providing a computer input capable of signaling user-acceptance of the final location of said marker.

21. (Currently amended) The process of claim 18 and further comprising computer processing means for calculating a vector direction corresponding to roof pitch for a roof plane based on at least one of ~~said~~ a non-dimensional attributes of common roof plane outline lines and their orientation.

22. (Original) The process of claim 18 and further comprising the act of generating in computer memory at least one adjustment roof plane, wherein said adjustment roof plan may be used to adjust for portions of the roof structure which are not fully visible from said aerial imagery.

22b. (Canceled)

23. (Original) A process for determining attributes of a roof structure of a real-world three-dimensional building, comprising the acts of:

Providing at least one computer input field for a user to input first location data generally corresponding to the location of the building;

Providing visual access to digital aerial imagery of a region including the roof structure of the building corresponding to said first location data;

On said imagery of a region providing a visual marker that is moveable on said computer monitor around said region, said marker initially corresponding to said first location data, wherein said marker may be moved to a final location on top of the building to more precisely identify the location of the building roof structure;

Providing a computer input capable of signaling user-acceptance of the final location of said marker.

24. (New) The process of claim 20 and further comprising the act of generating in computer memory at least one adjustment roof plane, wherein said adjustment roof plane may be used to adjust for portions of the roof structure which are not fully visible from said aerial imagery.

25. (New) The process of claim 23 and wherein said first location data comprised street address data, and wherein said final location is translated to latitude and longitude coordinates.

26. (New) The process of claim 25 and wherein said aerial imagery is from a first imagery database from which said final location is selected and is internet-based imagery having a corresponding street address look up field, and further comprising the act of:

using said latitude and longitude coordinates to access imagery from a second imagery database.

27. (New) The process of claim 26 and further comprising the act of:

generating, in computer memory, outline drawings around outlines corresponding to roof planes based on tracing from said imagery from said second imagery database.

28. (New) The process of claim 27 and wherein said providing acts are provided over an internet interface.

29. (New) The process of claim 28 and further comprising the act of:

providing a printed report that includes an aerial image of the building roof structure.

30. (New) The process of claim 23 and further comprising the act of:

generating, in computer memory, outline drawings around outlines corresponding to roof planes based on tracing from said imagery from said second imagery database.

31. (New) The process of claim 23 and wherein said providing acts are provided over an internet interface.

32. (New) The process of claim 23 and further comprising the act of:

providing a printed report that includes an aerial image of the building roof structure.

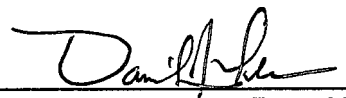
33. (New) The process of claim 32 and wherein the printed report includes a latitude reference and/or a longitude reference corresponding to the location of the building roof structure.

REMARKS

Applicant notes that the application as originally filed erroneously included two claims 22. The second claim 22 is canceled herein and represented as new claim 24. New claims 25 - 27 and 30 are related to original claims 9 and 10. Support for new claims 28 and 31 can at least be found in the specification at page 7, lines 6-7, page 20, lines 10-11, page 22, lines 15-18 and in claim 10. Support for new claims 29 and 32 can at least be found in the specification at page 6, lines 12-13, page 8, lines 18-19 and page 15, line 19. Support for new claim 33 can at least be found in the specification at page 22, lines 5-8. Applicant submits that these new claims contain no new matter.

Consideration of this Application, as amended herein, is requested. **The Examiner is encouraged to contact the undersigned by telephone to resolve any matters concerning the present application.**

Respectfully submitted,

By 

Daniel J. Luedérs, Reg. No. 32,581
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Indianapolis, Indiana 46204-5137
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	12/470,984
Confirmation No.:	4950
First-Named Inventor:	Dale R. Thornberry
Filing Date:	May 22, 2009
Group Art Unit:	2624
Examiner:	
Attorney Docket No.:	020283-000011
Title:	SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT TRANSMITTAL

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

1. List of All Patents, Publications, U.S. Applications, or Other Information

Pursuant to the provisions of 37 CFR 1.56, 1.97, and 1.98, Applicant requests consideration of the references listed on the attached PTO/SB/08 form(s) (commonly referred to as a PTO-1449 form) and/or the additional information identified below.

2. Enclosed Legible Copies

2a. A legible copy of each foreign patent document and publication listed on the PTO/SB/08 form is enclosed,

☐ i. except, a copy is not provided for each reference previously cited by or submitted to the Patent Office in prior U.S. Patent Application No. _____, filed _____ from which the present application claims priority under 35 U.S.C. §120.

☐ ii. except, a copy is not provided for each cumulative reference and enclosed reference identified below:

☐ 2b. A copy of the specification and drawings for each cited unpublished U.S. application.

☐ 2c. A copy of a Search Report or Written Opinion from a foreign patent office is also enclosed.

☐ 2d. Consideration of the enclosed additional and/or below discussed information is requested.

3. Concise Explanation of Relevance for Non-English Language Information

For each non-English language reference listed on the attached SB/08 form(s), reference is made to:

☐ 3a. an English language translation submitted herewith,

☐ 3b. foreign patent office Search Report (in the English language) submitted herewith,

☐ 3c. an English language translation of a foreign patent office Search Report submitted herewith,

☐ 3d. the concise explanation contained in the present application at page(s) ___,

☐ 3e. the concise explanation set forth in the attached English language abstract,

☐ 3f. a copy of a related patent publication (in the English language) cited herewith,

Foreign Patent Document	Corresponding English Language Patent Document

☐ 3g. the following concise explanation: _____.

4. Time for Filing

☒ 4a. This Information Disclosure Statement is submitted:

☐ i. for U.S. national applications or national stage PCT applications (not including CPAs and RCEs), within 3 months of filing or entry into national stage; and/or

☒ ii. for U.S. national applications, national stage PCT applications, CPAs or RCEs, before the first Office Action on the merits,

and thus no certification and/or fee is required.

☐ 4b. This information Disclosure Statement is submitted after three months from the filing date and after the first Office Action on the merits, but prior to the mailing date of a final Office Action or Notice of Allowance, and thus:

☐ i. the statement specified in 37 CFR §1.97(e) is provided below, or

☐ ii. the fee set forth in 37 CFR §1.17(p) is enclosed.

☐ 4c. This Information Disclosure Statement is submitted after the mailing date of a final Office Action or Notice of Allowance and prior to payment of the issue fee, and thus:

☐ i. the statement specified in 37 CFR §1.97(e) is provided below, and the fee set forth in 37 CFR §1.17(p) is enclosed, or

☐ ii. a Request for Continued Examination (RCE) and fee of 37 CFR §1.17(e) has been filed.

☐ 4d. This Information Disclosure Statement is submitted after payment of the issue fee, and thus:

i. a Petition to Withdraw from Issue pursuant to 37 CFR §1.313(c)(2) has been filed, and

ii. a Request for Continued Examination (RCE) and fee of 37 CFR §1.17(e) has been filed.

5. Certification- Statement Under 37 CFR 1.97(e)

☐ 5a. It is hereby certified that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.

☐ 5b. A copy of a dated communication from a foreign patent office which clearly shows the statement is being submitted within three (3) months of the date on the communication is enclosed.

☐ 5c. It is hereby certified that no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, no item of information contained in this Information Disclosure Statement was known to any individual designated in §1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

The filing of this Information Disclosure Statement shall not be construed as an admission that the information cited is, or is considered to be, material to patentability as defined in §1.56(b). It is believed that no additional fees are required. Should any other fee be required, however, please charge such fee to Deposit Account No. 23-3030, but not to include any payment of issue fees.

Respectfully submitted,

By _____

Daniel J. Lueders, Reg. No. 32581
Woodard, Emhardt, Moriarty, McNett & Henry LLP
111 Monument Circle, Suite 3700
Indianapolis, Indiana 46204-5137
Telephone: (317) 634-3456 Fax: (317) 637-7561
Email: dlueders@uspatent.com

PTO/SB/08b (06-09)
Approved for use through 07/31/2009. OMB 0651-0031
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Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet | | of | |

Complete if Known	
Application Number	12/470,984
Filing Date	May 22, 2009
First Named Inventor	Thornberry, Dale
Art Unit	2624
Examiner Name	Unassigned
Attorney Docket Number	020283-000011

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]
	1	OLOF HENRICSSON, The Role of Color Attributes and Similarity Grouping in 3-D Building Reconstruction, Institute of Photogrammetry and Geodesy, Zurich, Switzerland	
	2	CC-Modeler: a topology generator for 3-D city models, abstract, May 15, 1998	
	3	ARMIN GRUEN and HINHUA WANG; CC-Modeler: A Topology Generator for 3-D City Models, Inst. of Geodesy and Photogrammetry, Zurich, Switzerland	
	4	MICROSOFT'S MSN VIRTUAL EARTH: The Map is the Search Platform; February 6, 2009	
	5	EAGLE VIEW TECHNOLOGIES; Eagle View Measurements Premium Report; October 22, 2008	

Examiner Signature		Date Considered	

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

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. 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 2 hours 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, 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 (1-800-786-9199) and select option 2.

Electronic Patent Application Fee Transmittal

Application Number:	12470984
Filing Date:	22-May-2009
Title of Invention:	SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY
First Named Inventor/Applicant Name:	Dale R. Thornberry
Filer:	Daniel Lueders/Jackie Pike
Attorney Docket Number:	020283-000011

Filed as Small 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	2202	10	26	260
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
			Total in USD ($)	**260**

Electronic Acknowledgement Receipt

EFS ID:	6834982
Application Number:	12470984
International Application Number:	
Confirmation Number:	4950
Title of Invention:	SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY
First Named Inventor/Applicant Name:	Dale R. Thornberry
Customer Number:	30565
Filer:	Daniel Lueders/Jackie Pike
Filer Authorized By:	Daniel Lueders
Attorney Docket Number:	020283-000011
Receipt Date:	19-JAN-2010
Filing Date:	22-MAY-2009
Time Stamp:	14:53:19
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$260
RAM confirmation Number	1305
Deposit Account	233030
Authorized User	LUEDERS,DANIEL J.

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 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

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		Preliminary_Amendment_020283-000011.pdf	427352 b275807cd77b27b5c33dfc1e4a202f9dbae59b5a	yes	13

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Preliminary Amendment	1	1
	Claims	2	12
	Applicant Arguments/Remarks Made in an Amendment	13	13

Warnings:

Information:

2		Supp_IDS_020283-000011.pdf	203380 93de5bb83969b4fae5c216ae942b689976ca4742	yes	5

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Transmittal Letter	1	4
	Information Disclosure Statement (IDS) Filed (SB/08)	5	5

Warnings:

Information:

3	NPL Documents	Olof_Henricsson_020283-000011.pdf	3323005 c5eb8153c909e98d118a5ca4998c3a3246137941	no	55

Warnings:

Information:

4	NPL Documents	CC-Modeler_020283-000011.pdf	132797 f9b41e85f22e6ca8a1b5ba5d7c9592932a54af67	no	2

Warnings:

Information:

5	NPL Documents	Armin_Gruen_Xinhua_Wang_020283-000011.pdf	1662543 b45f1d8569a6186145a049ffb885c6131c78ba94	no	11

Warnings:					
Information:					
6	NPL Documents	Microsofts_MSN_Virtual_Earth_020283-000011.pdf	6722311 14b8f0c2bb69a1a6c9ec13aca424689cebc2e07b	no	10
Warnings:					
Information:					
7	NPL Documents	Eagle_View_Technologies_020283-000011.pdf	1514947 8706a5b2f84a8b3795bd49b0511f2faa53326a0c	no	7
Warnings:					
Information:					
8	Fee Worksheet (PTO-875)	fee-info.pdf	30311 32e86dfcefa1f02219a93065fccffb63ca294c31	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	14016646		

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.

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	Filing Date	☐ To be Mailed
12/470,984	05/22/2009	

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	82		N/A	
☒ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	270		N/A	
☒ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	110		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	24 minus 20 =	* 4	X $26 =	104	OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3 minus 3 =	* 0	X $110 =	0		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	566		TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT 01/19/2010

	(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))	* 33	Minus	** 24	= 9	X $26 =	234	OR	X $ =	
Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0	X $110 =	0	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	234	OR	TOTAL ADD'L FEE	

AMENDMENT

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) 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:
/STEPHEN HOOVER/

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 (09-06)
Approved for use through 03/31/2007. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
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Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 1

Complete if Known	
Application Number	12/470,984
Filing Date	05-22-09
First Named Inventor	Dale R. Thornberry
Art Unit	2624
Examiner Name	Unknown
Attorney Docket Number	020283-000011

U.S. PATENT DOCUMENTS

Examiner initial *	Cite No. 1	Document Number Number	Kind Code[2] (if known)	Publication Date MM-DD-YY	Name of Patentee or Applicant of Cited Document	Pages, columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	US-2003/0014224		01-16-03	Guo et al.	
	2	US-2005/0038636		02-17-05	Wakelam et al.	
	3	US-2006/0282235		12-14-06	Thomas et al.	
	4	US-5,319,541		06-07-94	Blanchard et al.	
	5	US-5,625,827		04-29-97	Krause et al.	
	6	US-6,766,282		07-20-04	Schettine	
	7	US-6,859,768		02-22-05	Wakelam et al.	
	8	US-7,164,883		01-16-07	Rappaport et al.	
	9	US-7,305,983		12-11-07	Meder et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initial *	Cite No. 1	Foreign Patent Document Country[3] Code	Number[4] Kind Code (if known)[5]	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]
	10	WO	20000029806	05-25-00	Friedhelm et al.		

Examiner Signature		Date Considered	

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

1. Applicant's unique citation designation number (optional) 2. See Kinds codes of USPTO patent Documents. at www.uspto.gov or MPEP 901.04.

3. Enter Office that isssued the document, by the two-letter code (WIPO Standard ST.3.) 4. For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.f 16 if possible. 6. Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. 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 2 hours to complete, including gathering, preparing, and submitting the completed application form 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, 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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Electronic Acknowledgement Receipt

EFS ID:	7003715
Application Number:	12470984
International Application Number:	
Confirmation Number:	4950
Title of Invention:	SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY
First Named Inventor/Applicant Name:	Dale R. Thornberry
Customer Number:	30565
Filer:	Daniel Lueders/Laurie Sweet
Filer Authorized By:	Daniel Lueders
Attorney Docket Number:	020283-000011
Receipt Date:	12-FEB-2010
Filing Date:	22-MAY-2009
Time Stamp:	16:08:14
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	IDS_Transmittal.pdf	149883 396baa4723cde99443c76709689a375f9bc297d6	no	4

Warnings:	
Information:	

2	Information Disclosure Statement (IDS) Filed (SB/08)	IDS.pdf	672992 79144153aae029379cb8a244cdcd697d0ae68e37	no	1
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	Foreign Reference	Foreign_Reference.pdf	925014 eb8874001426acdbbac5b1d1510c53574d8c3d5d	no	14
Warnings:					
Information:					
		Total Files Size (in bytes):	1747889		

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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.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	12/470,984
Confirmation No.:	4950
First-Named Inventor:	Dale R. Thornberry
Filing Date:	May 22, 2009
Group Art Unit:	2624
Examiner:	Unknown
Attorney Docket No.:	020283-000011
Title:	SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY

INFORMATION DISCLOSURE STATEMENT TRANSMITTAL

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

1. List of All Patents, Publications, U.S. Applications, or Other Information

Pursuant to the provisions of 37 CFR 1.56, 1.97, and 1.98, Applicant requests consideration of the references listed on the attached PTO/SB/08 form(s) (commonly referred to as a PTO-1449 form) and/or the additional information identified below.

2. Enclosed Legible Copies

2a. A legible copy of each foreign patent document and publication listed on the PTO/SB/08 form is enclosed,

☐ i. except, a copy is not provided for each reference previously cited by or submitted to the Patent Office in prior U.S. Patent Application No. _____, filed _____ from which the present application claims priority under 35 U.S.C. §120.

☐ ii. except, a copy is not provided for each cumulative reference and enclosed reference identified below:

☐ 2b. A copy of the specification and drawings for each cited unpublished U.S. application.

☐ 2c. A copy of a Search Report or Written Opinion from a foreign patent office is also enclosed.

☐ 2d. Consideration of the enclosed additional and/or below discussed information is requested.

3. Concise Explanation of Relevance for Non-English Language Information

For each non-English language reference listed on the attached SB/08 form(s), reference is made to:

☐ 3a. an English language translation submitted herewith,

☐ 3b. foreign patent office Search Report (in the English language) submitted herewith,

☐ 3c. an English language translation of a foreign patent office Search Report submitted herewith,

☐ 3d. the concise explanation contained in the present application at page(s) ___,

☐ 3e. the concise explanation set forth in the attached English language abstract,

☐ 3f. a copy of a related patent publication (in the English language) cited herewith,

Foreign Patent Document	Corresponding English Language Patent Document

☐ 3g. the following concise explanation: _____.

4. Time for Filing

☒ 4a. This Information Disclosure Statement is submitted:

☐ i. for U.S. national applications or national stage PCT applications (not including CPAs and RCEs), within 3 months of filing or entry into national stage; and/or

☒ ii. for U.S. national applications, national stage PCT applications, CPAs or RCEs, before the first Office Action on the merits,

and thus no certification and/or fee is required.

☐ 4b. This information Disclosure Statement is submitted after three months from the filing date and after the first Office Action on the merits, but prior to the mailing date of a final Office Action or Notice of Allowance, and thus:

☐ i. the statement specified in 37 CFR §1.97(e) is provided below, or

☐ ii. the fee set forth in 37 CFR §1.17(p) is enclosed.

☐ 4c. This Information Disclosure Statement is submitted after the mailing date of a final Office Action or Notice of Allowance and prior to payment of the issue fee, and thus:

☐ i. the statement specified in 37 CFR §1.97(e) is provided below, and the fee set forth in 37 CFR §1.17(p) is enclosed, or

☐ ii. a Request for Continued Examination (RCE) and fee of 37 CFR §1.17(e) has been filed.

☐ 4d. This Information Disclosure Statement is submitted after payment of the issue fee, and thus:

i. a Petition to Withdraw from Issue pursuant to 37 CFR §1.313(c)(2) has been filed, and

ii. a Request for Continued Examination (RCE) and fee of 37 CFR §1.17(e) has been filed.

5. Certification- Statement Under 37 CFR 1.97(e)

☐ 5a. It is hereby certified that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.

☐ 5b. A copy of a dated communication from a foreign patent office which clearly shows the statement is being submitted within three (3) months of the date on the communication is enclosed.

☐ 5c. It is hereby certified that no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, no item of information contained in this Information Disclosure Statement was known to any individual designated in §1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

The filing of this Information Disclosure Statement shall not be construed as an admission that the information cited is, or is considered to be, material to patentability as defined in §1.56(b). It is believed that no additional fees are required. Should any other fee be required, however, please charge such fee to Deposit Account No. 23-3030, but not to include any payment of issue fees.

Respectfully submitted,

By _____

Daniel J. Lueders, Reg. No. 32581
Woodard, Emhardt, Moriarty, McNett & Henry LLP
111 Monument Circle, Suite 3700
Indianapolis, Indiana 46204-5137
Telephone: (317) 634-3456 Fax: (317) 637-7561
Email: lueders@uspatent.com

PTO/SB/08a (09-06)
Approved for use through 03/31/2007. 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.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 1

Complete if Known	
Application Number	12/470,984
Filing Date	05-22-09
First Named Inventor	Dale R. Thornberry
Art Unit	2624
Examiner Name	
Attorney Docket Number	020283-000011

U.S. PATENT DOCUMENTS

Examiner initial *	Cite No. 1	Document Number: Number	Document Number: Kind Code[2] (if known)	Publication Date MM-DD-YY	Name of Patentee or Applicant of Cited Document	Pages, columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	US-2002/0154174		10-24-02	Redlich et al.	
	2	US-2005/0288959		12-29-05	Eraker et al.	
	3	US-2006/0200311		09-07-06	Arutunian et al.	
	4	US-2009/0132436		05-21-09	Pershing et al.	
	5	US-6,323,885		11-27-01	Wiese	
	6	US-6,385,541		05-07-02	Blumberg et al.	
	7	US-6,446,053		09-03-02	Elliott	
	8	US-6,636,803		10-21-03	Hartz Jr. et al.	
	9	US-6,836,270		12-28-04	Du	
	10	US-7,003,400		02-21-06	Bryant	
	11	US-7,006,977		02-28-06	Attra et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initial *	Cite No. 1	Foreign Patent Document: Country[3] Code	Foreign Patent Document: Number[4] Kind Code (if known)[5]	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]

Examiner Signature		Date Considered	

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

1. Applicant's unique citation designation number (optional) 2. See Kinds codes of USPTO patent Documents. at www.uspto.gov or MPEP 901.04.
3. Enter Office that isssued the document, by the two-letter code (WIPO Standard ST.3.) 4. For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.f 16 if possible. 6. Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. 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 2 hours to complete, including gathering, preparing, and submitting the completed application form 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, 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 assisstance in completing the form, call 1-800-PTO-9199 (1-800-786.9199) and select option 2.

Electronic Acknowledgement Receipt

EFS ID:	7169900
Application Number:	12470984
International Application Number:	
Confirmation Number:	4950
Title of Invention:	SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY
First Named Inventor/Applicant Name:	Dale R. Thornberry
Customer Number:	30565
Filer:	Daniel Lueders/Laurie Sweet
Filer Authorized By:	Daniel Lueders
Attorney Docket Number:	020283-000011
Receipt Date:	09-MAR-2010
Filing Date:	22-MAY-2009
Time Stamp:	13:38:44
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.pdf	248716 d4a2634571ac7a4208d8ddff6a9bfab72538b90a	yes	5

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Transmittal Letter	1	4
	Information Disclosure Statement (IDS) Filed (SB/08)	5	5
Warnings:			
Information:			
	Total Files Size (in bytes):	248716	

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.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	12/470,984
Confirmation No.:	4950
First-Named Inventor:	Dale R. Thornberry
Filing Date:	May 22, 2009
Group Art Unit:	2624
Examiner:	Unknown
Attorney Docket No.:	020283-000011
Title:	SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT TRANSMITTAL

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

1. List of All Patents, Publications, U.S. Applications, or Other Information

Pursuant to the provisions of 37 CFR 1.56, 1.97, and 1.98, Applicant requests consideration of the references listed on the attached PTO/SB/08 form(s) (commonly referred to as a PTO-1449 form) and/or the additional information identified below.

2. Enclosed Legible Copies

2a. A legible copy of each foreign patent document and publication listed on the PTO/SB/08 form is enclosed,

☐ i. except, a copy is not provided for each reference previously cited by or submitted to the Patent Office in prior U.S. Patent Application No. _____, filed _____ from which the present application claims priority under 35 U.S.C. §120.

☐ ii. except, a copy is not provided for each cumulative reference and enclosed reference identified below:

☐ 2b. A copy of the specification and drawings for each cited unpublished U.S. application.

☐ 2c. A copy of a Search Report or Written Opinion from a foreign patent office is also enclosed.

☐ 2d. Consideration of the enclosed additional and/or below discussed information is requested.

3. Concise Explanation of Relevance for Non-English Language Information

For each non-English language reference listed on the attached SB/08 form(s), reference is made to:

☐ 3a. an English language translation submitted herewith,

☐ 3b. foreign patent office Search Report (in the English language) submitted herewith,

☐ 3c. an English language translation of a foreign patent office Search Report submitted herewith,

☐ 3d. the concise explanation contained in the present application at page(s) ___,

☐ 3e. the concise explanation set forth in the attached English language abstract,

☐ 3f. a copy of a related patent publication (in the English language) cited herewith,

Foreign Patent Document	Corresponding English Language Patent Document

☐ 3g. the following concise explanation: _____.

4. Time for Filing

☒ 4a. This Information Disclosure Statement is submitted:

☐ i. for U.S. national applications or national stage PCT applications (not including CPAs and RCEs), within 3 months of filing or entry into national stage; and/or

☒ ii. for U.S. national applications, national stage PCT applications, CPAs or RCEs, before the first Office Action on the merits,

and thus no certification and/or fee is required.

☐ 4b. This information Disclosure Statement is submitted after three months from the filing date and after the first Office Action on the merits, but prior to the mailing date of a final Office Action or Notice of Allowance, and thus:

☐ i. the statement specified in 37 CFR §1.97(e) is provided below, or

☐ ii. the fee set forth in 37 CFR §1.17(p) is enclosed.

☐ 4c. This Information Disclosure Statement is submitted after the mailing date of a final Office Action or Notice of Allowance and prior to payment of the issue fee, and thus:

☐ i. the statement specified in 37 CFR §1.97(e) is provided below, and the fee set forth in 37 CFR §1.17(p) is enclosed, or

☐ ii. a Request for Continued Examination (RCE) and fee of 37 CFR §1.17(e) has been filed.

☐ 4d. This Information Disclosure Statement is submitted after payment of the issue fee, and thus:

i. a Petition to Withdraw from Issue pursuant to 37 CFR §1.313(c)(2) has been filed, and

ii. a Request for Continued Examination (RCE) and fee of 37 CFR §1.17(e) has been filed.

5. Certification- Statement Under 37 CFR 1.97(e)

☐ 5a. It is hereby certified that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.

☐ 5b. A copy of a dated communication from a foreign patent office which clearly shows the statement is being submitted within three (3) months of the date on the communication is enclosed.

☐ 5c. It is hereby certified that no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, no item of information contained in this Information Disclosure Statement was known to any individual designated in §1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

The filing of this Information Disclosure Statement shall not be construed as an admission that the information cited is, or is considered to be, material to patentability as defined in §1.56(b). It is believed that no additional fees are required. Should any other fee be required, however, please charge such fee to Deposit Account No. 23-3030, but not to include any payment of issue fees.

Respectfully submitted,

By _____

Daniel J. Lueders, Reg. No. 32581
Woodard, Emhardt, Moriarty, McNett & Henry LLP
111 Monument Circle, Suite 3700
Indianapolis, Indiana 46204-5137
Telephone: (317) 634-3456 Fax: (317) 637-7561
Email: lueders@uspatent.com

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
12/470,984	05/22/2009	Dale R. Thornberry	020283-000011

CONFIRMATION NO. 4950

30565
Woodard, Emhardt, Moriarty, McNett & Henry LLP
111 Monument Circle, Suite 3700
Indianapolis, IN 46204-5137

PUBLICATION NOTICE

OC000000044678381

Title:SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY

Publication No.US-2010-0296693-A1
Publication Date:11/25/2010

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/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

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.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

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

PTO/SB/08a (07-09)
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Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 2

Complete if Known	
Application Number	12/470,984
Filing Date	May 22, 2009
First Named Inventor	Dale R. Thornberry
Art Unit	2624
Examiner Name	
Attorney Docket Number	020283-000011

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
	1	US- 20100110074 i	05-06-2010	Chris Pershing	
		US-			
		US-			
		US-			
		US-			
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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]
	2	AU2008230031	11-05-2009	David P. Carlson, et al		

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. 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 2 hours 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, 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 (1-800-786-9199) and select option 2.

PTO/SB/08b (07-09)
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 2 of 2

Complete if Known	
Application Number	12/470,984
Filing Date	May 22, 2009
First Named Inventor	Dale R. Thornberry
Art Unit	2624
Examiner Name	
Attorney Docket Number	020283-000011

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]
	3	U.S. Provisional Application 61/197,904 related to U.S. Patent Application, Serial No. 2010/0110074 published May 6, 2010.	

Examiner Signature		Date Considered	

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

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. 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 2 hours 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, 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 (1-800-786-9199) and select option 2.

Electronic Acknowledgement Receipt

EFS ID:	9454065
Application Number:	12470984
International Application Number:	
Confirmation Number:	4950
Title of Invention:	SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY
First Named Inventor/Applicant Name:	Dale R. Thornberry
Customer Number:	30565
Filer:	James Roy Blaufuss./Glenna Perry
Filer Authorized By:	James Roy Blaufuss.
Attorney Docket Number:	020283-000011
Receipt Date:	16-FEB-2011
Filing Date:	22-MAY-2009
Time Stamp:	07:18:04
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_Cover_Letter_20283-11.pdf	172815 bdbd019f166bea114d5ff7ca5d46e305c75be1e0	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:					
2	Foreign Reference	AU2008230031_20283-11.pdf	1576510 612a552281ab94f22193fbae760bbdbdb83f5a1c	no	47
Warnings:					
Information:					
3	NPL Documents	Provisional_App_20283-11.pdf	18093812 77f406cbcd8f1b323bb2fa2a640519f1f71a4f61	no	65
Warnings:					
Information:					
		Total Files Size (in bytes):	19843137		

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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.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	12/470,984
Confirmation No.:	4950
First-Named Inventor:	Dale R. Thornberry
Filing Date:	May 22, 2009
Group Art Unit:	2624
Examiner:	
Attorney Docket No.:	020283-000011
Title:	SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT TRANSMITTAL

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to the provisions of 37 CFR 1.56, 1.97, and 1.98, Applicant requests consideration of the references listed on the attached PTO/SB/08 forms (commonly referred to as a PTO-1449 form) and the additional information identified below. A legible copy of each foreign patent document and publication listed on the PTO/SB/08 form is enclosed. This Information Disclosure Statement is submitted for US national applications, national stage PCT applications, CPAs or RCEs, before the first Office Action on the merits, and thus no certification and/or fee is required.

The information listed on the attached PTO/SB/08 forms was brought to Applicant's attention due to a dispute with a third party regarding the patentability of the present application. The third party contends that Applicant's claims are anticipated and/or obvious in view of the references listed on the attached PTO/SB/08 forms. Applicant's disagree with this conclusion but include this information for complete disclosure.

The filing of this Information Disclosure Statement shall not be construed as an admission that the information cited is, or is considered to be, material to patentability as defined in §1.56(b). It is believed that no fees are required. Should any fee be required, however, please charge such fee to Deposit Account No. 23-3030, but not to include any payment of issue fees.

Respectfully submitted,

By _____

James R. Blaufuss, Reg. No. 58473
Woodard, Emhardt, Moriarty, McNett & Henry LLP
111 Monument Circle, Suite 3700
Indianapolis, Indiana 46204-5137
Telephone: (317) 634-3456 Fax: (317) 637-7561
Email: dlueders@uspatent.com

PTO/SB/08a (07-09)
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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Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 3

Complete if Known	
Application Number	12/470,984
Filing Date	05-22-09
First Named Inventor	Dale R. Thornberry
Art Unit	
Examiner Name	
Attorney Docket Number	020283-000011

U.S. PATENT DOCUMENTS

Examiner initial *	Cite No. 1	Document Number: Number	Document Number: Kind Code2 (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
	1	US-2008/0105045		05-08-2008	Woro	
	2	US-2008/0221843		09-11-2008	Shenkar et al.	
	3	US-2010/0114537		05-06-2010	Pershing	
	4	US-2010/0179787		07-15-2010	Pershing et al	
	5	US-5,633,995		05-27-1997	McClain	
	6	US-6,396,491		05-28-2002	Watanabe et al.	
	7	US-6,496,184		12-17-2002	Freeman et al.	
	8	US-6,980,690		12-27-2005	Taylor et al.	
	9	US-7,324,666		01-29-2008	Zoken et al.	
	10	US-7,343,268		03-11-2008	Kishikawa	

FOREIGN PATENT DOCUMENTS

Examiner Initial *	Cite No. 1	Foreign Patent Document: Country3 Code	Foreign Patent Document: Number4 Kind Code (if known)5	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, columns, Lines, Where Relevant Passages or Relevant Figures Appear	T6
	11	AU	2010219392 A1	09-30-2010	Eagle View Technologies, Inc.		

Examiner Signature		Date Considered	

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

1. Applicant's unique citation designation number (optional) 2. See Kinds codes of USPTO patent Documents. at www.uspto.gov or MPEP 901.04.

3. Enter Office that isssued the document, by the two-letter code (WIPO Standard ST.3.) 4. For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.f 16 if possible. 6. Applicant is to place a check mark here if English language Translation is attached.

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

If you need assisstance in completing the form, call 1-800-PTO-9199 (1-800-786.9199) and select option 2.

PTO/SB/08b (07-09)
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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Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 2 of 3

Complete if Known	
Application Number	12/470,984
Filing Date	05-22-09
First Named Inventor	Dale R. Thornberry
Group Art Unit	
Examiner Name	
Attorney Docket Number	020283-000011

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner initial *	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]
	12	"Automatic House Reconstruction", http://www.vision.ee.ethz.ch/projects/Amobe_l/recons.html, accessed 3/15/2010	
	13	"PhotoModeler--Measure and Model Real-World Objects From Photographs", http://www.photomodeler.com/products/photomodeler.htm, accessed on 03/15/2010.	
	14	Baillard C. et al., "Automatic Reconstruction Of Piecewise Planar Models From Multiple Views", Dept. of Engineering Science, University of Oxford	
	15	Bignone, Frank, et al., "Automatic Extraction of Generic House Roofs From High Resolution Aerial Imagery", Swiss Federal Institute of Technology ETH, Switzerland.	
	16	Chevrier C., et al., "Interactive 3D Reconstruction For Urban Areas: An Image Based Tool", CAAD Futures 2001.pp. 1-13.	
	17	Debevec, Paul E. et al., "Modeling and Rendering Architecture From Photographs: A Hybrid Geometry-And-Image Based Approach", University of California at Berkeley, 1996.	
	18	Delaney, Kevin J., "Searching For Clients From Above", The Wall Street Journal, July 31, 2007.	
	19	Faugeras et al., "3-D Reconstruction of Urban Scenes From Image Sequences", INRIA, 2004, France, Sept. 11, 1997.	
	20	Henricsson, O. et al., "3-D Building Reconstruction with ARUBA: A Qualitative and Quantitative Evaluation," Institute of Geodesy and Photogrammetry, Switzerland, 1997, 12 pages.	
	21	http://www.precigeo.com/, "Solar Professionals, Insurance Adjusters, Roofing and Landscape Estimators: Use Precigeo To Get Rapid, Accurate and Visually Compelling SKetches and Measurements, accessed on 3/15/10.	
	22	Noronha, S. et al., "Detection and Modeling of Buildings From Multiple Aerial Images", Institute for Robotics and intelligent Systems, University of Southern California.	

Examiner Signature		Date Considered	

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

1. Applicants unique citation designation number. (optional) 2. Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. 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 2 hours to complete, including gathering, preparing, and submitting the completed application form 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 Cheif Information Officer, U.S. Patent and Trademark Office, 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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Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 3 of 3

Complete if Known	
Application Number	12/470,984
Filing Date	05-22-09
First Named Inventor	Dale R. Thornberry
Group Art Unit	
Examiner Name	
Attorney Docket Number	020283-000011

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner initial *	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
	23	Poullis et al., "Photogrammetric Modeling And Image-Based Rendering For Rapid Virtual Environment Creation", University of Souithern California, Institute For Creative Technologies,	
	24	Scholze, Stephan, "A Probabilistic Approach To Building Roof Reconstruction", A Dissertation Submitted To The Swiss Federal Institute Of Technology Zurich, 2002.	
	25	Ziegler et al., 3D Reconstruction Using Labeled Image Regions, Eurographics Symposium on Geometry Processing, 2003.	

Examiner Signature		Date Considered	

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

1. Applicants unique citation designation number. (optional) 2. Applicant is to place a check mark here if English language Translation is attached.

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Electronic Acknowledgement Receipt

EFS ID:	9590981
Application Number:	12470984
International Application Number:	
Confirmation Number:	4950
Title of Invention:	SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY
First Named Inventor/Applicant Name:	Dale R. Thornberry
Customer Number:	30565
Filer:	Daniel Lueders/Laurie Sweet
Filer Authorized By:	Daniel Lueders
Attorney Docket Number:	020283-000011
Receipt Date:	04-MAR-2011
Filing Date:	22-MAY-2009
Time Stamp:	16:34:56
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.pdf	269387 db927da2e745e96e6fa0fd15c834cf416a6dbcb3	yes	5

	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Transmittal Letter		1	2	
	Information Disclosure Statement (IDS) Filed (SB/08)		3	5	
Warnings:					
Information:					
2	Foreign Reference	AU2010219392.pdf	1628234 44e8c52cb637612e43c00731040be07daed92fcd	no	47
Warnings:					
Information:					
3	NPL Documents	AutomaticHouseReconstruction.pdf	395880 ed312787687ca4536bcceb4893bfbefb67b88d59	no	6
Warnings:					
Information:					
4	NPL Documents	PhotoModeler.pdf	142202 1c1583722bc5258a815a3307993503e2d5d4786a	no	2
Warnings:					
Information:					
5	NPL Documents	Baillard.pdf	1502951 4d180f830deb91ab544d2bbf49068c507be43e40	no	7
Warnings:					
Information:					
6	NPL Documents	Bignone.pdf	400957 ddf5e1463a35b67c71911bdfb97451c92284c129	no	12
Warnings:					
Information:					
7	NPL Documents	Debevec.pdf	1206491 1288ca203a593b57cbea1d9c8b5810430a57c5bd	no	10
Warnings:					
Information:					
8	NPL Documents	Delaney_Wall_Street_Journal.pdf	367106 d989524efd3a0cb17fdc3373836f4868c94e3f36	no	3
Warnings:					
Information:					

9	NPL Documents	Faugeras.pdf	185112 632b0ce4724fd22772c5d6484084399ab2ae3d19	no	26
Warnings:					
Information:					
10	NPL Documents	HENRICSSON.pdf	194455 b50850859ef4c6a81076e24a04943469799b82a0	no	12
Warnings:					
Information:					
11	NPL Documents	precigeo_Home.pdf	240734 56c26e4f75c337e23bee4a32a5d2bad1bdb3d836	no	1
Warnings:					
Information:					
12	NPL Documents	Noronha.pdf	1800098 b2a6db38e5f4823801d9b0635cd2b9265897038c	no	32
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The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing					
Information:					
13	NPL Documents	Scholze.pdf	5629728 712e720339eea75239157cbdd4bb2e0229b9ddde	no	210
Warnings:					
Information:					
14	NPL Documents	3D_Reconstruction_Ziegler.pdf	2101908 5c765e93c70758f34ac2fb802e491491f2de4222	no	12
Warnings:					
Information:					
15	NPL Documents	Interactive_3D_Reconstruction_Chevrier.pdf	377341 7b74acb8db6411c22c0b48dabf234b156ffe56d1	no	13
Warnings:					
Information:					
16	NPL Documents	Photogrammetric_Modeling_Poullis.pdf	1118052 5131128c16122ad9d2159da8ef76168ab14ccba4	no	8
Warnings:					
Information:					
		Total Files Size (in bytes):	17560636		

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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.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	12/470,984
Confirmation No.:	4950
First-Named Inventor:	Dale R. Thornberry
Filing Date:	May 22, 2009
Group Art Unit:	2624
Examiner:	
Attorney Docket No.:	020283-000011
Title:	SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT TRANSMITTAL

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to the provisions of 37 CFR 1.56, 1.97, and 1.98, Applicant requests consideration of the references listed on the attached PTO/SB/08 forms (commonly referred to as a PTO-1449 form) and the additional information identified below. A legible copy of each foreign patent document and publication listed on the PTO/SB/08 form is enclosed. This Information Disclosure Statement is submitted for US national applications, national stage PCT applications, CPAs or RCEs, before the first Office Action on the merits, and thus no certification and/or fee is required.

The information listed on the attached PTO/SB/08 forms was brought to Applicant's attention due to a dispute with a third party regarding the patentability of the present application. The third party contends that Applicant's claims are anticipated and/or obvious in view of the references listed on the attached PTO/SB/08 forms. Applicants disagree with this conclusion, but include this information for complete disclosure.

The filing of this Information Disclosure Statement shall not be construed as an admission that the information cited is, or is considered to be, material to patentability as defined in §1.56(b). It is believed that no fees are required. Should any fee be required, however, please charge such fee to Deposit Account No. 23-3030, but not to include any payment of issue fees.

Respectfully submitted,

By _____

Daniel J. Lueders, Reg. No. 32581
Woodard, Emhardt, Moriarty, McNett & Henry LLP
111 Monument Circle, Suite 3700
Indianapolis, Indiana 46204-5137
Telephone: (317) 634-3456 Fax: (317) 637-7561
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PTO/SB/81 (01-09)
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POWER OF ATTORNEY OR REVOCATION OF POWER OF ATTORNEY WITH A NEW POWER OF ATTORNEY AND CHANGE OF CORRESPONDENCE ADDRESS

Application Number	12/470,984
Filing Date	05/22/2009
First Named Inventor	Dale R. Thornberry et al.
Title	System and Process for Roof Measurement Using Aerial Imagery
Art Unit	2624
Examiner Name	Unknown
Attorney Docket Number	6338.140

I hereby revoke all previous powers of attorney given in the above-identified application.

☐ A Power of Attorney is submitted herewith.

OR

☒ I hereby appoint Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

30589

OR

☐ I hereby appoint Practitioner(s) named below as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Practitioner(s) Name	Registration Number

Please recognize or change the correspondence address for the above-identified application to:

☐ The address associated with the above-mentioned Customer Number.

OR

☒ The address associated with Customer Number: 30589

OR

☒	Firm or Individual Name	DUNLAP CODDING, P.C.			
Address		P.O. Box 16370			
City		Oklahoma City	State	OK	Zip 73113
Country		US			
Telephone		405-607-8600	Email		

I am the:

☐ Applicant/Inventor.

OR

☒ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) (Form PTO/SB/96) submitted herewith or filed on _____

SIGNATURE of Applicant or Assignee of Record

Signature		Date	8/30/2011
Name	Steve Schultz	Telephone	585-487-1527
Title and Company	Chief Technology Officer		

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☒ *Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. 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 1.11 and 1.14. This collection is estimated to take 3 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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PTO/SB/96 (07-09)
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STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: Dale R. Thornberry et al.

Application No./Patent No.: 12/470,984 Filed/Issue Date: 05/22/2009

Titled: System and Process for Roof Measurement Using Aerial Imagery

Pictometry International Corporation, a corporation
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☑ the assignee of the entire right, title, and interest in;

2. ☐ an assignee of less than the entire right, title, and interest in
(The extent (by percentage) of its ownership interest is _____ %); or

3. ☐ the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made)

the patent application/patent identified above, by virtue of either:

A. ☑ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 026820, Frame 0931, or for which a copy therefore is attached.

OR

B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: _____ To: _____
The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

2. From: _____ To: _____
The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

3. From: _____ To: _____
The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☐ As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (*i.e.*, a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

_____ 8/30/2011
Signature Date

Steve Schultz Chief Technology Officer
Printed or Typed Name Title

This collection of information is required by 37 CFR 3.73(b). 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 1.11 and 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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Electronic Acknowledgement Receipt

EFS ID:	10886195
Application Number:	12470984
International Application Number:	
Confirmation Number:	4950
Title of Invention:	SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY
First Named Inventor/Applicant Name:	Dale R. Thornberry
Customer Number:	30565
Filer:	Marc Alan Brockhaus/Lori Radford
Filer Authorized By:	Marc Alan Brockhaus
Attorney Docket Number:	020283-000011
Receipt Date:	06-SEP-2011
Filing Date:	22-MAY-2009
Time Stamp:	17:18:15
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	Miscellaneous Incoming Letter	6338140_Transmittal09062011.pdf	64888 1b226373b10d4b4955dfcf8bae2950848b60075b	no	1

Warnings:	
Information:	

2	Power of Attorney	6338140_POAendorsed.pdf	297445 3fd62dc8a41708664a72b3728fd38802483 06103	no	1
Warnings:					
Information:					
3	Assignee showing of ownership per 37 CFR 3.73(b).	6338140_Statementendorsed.pdf	249423 a7bab5bb4d3e26f4d14eab3057a0d20991 5bc4c4	no	1
Warnings:					
Information:					
		Total Files Size (in bytes):	611756		

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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.

Doc Code: TRAN.LET

Document Description: Transmittal Letter

PTO/SB/21 (07-09)
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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number	12/470,984
Filing Date	05/22/2009
First Named Inventor	Dale R. Thornberry et al.
Art Unit	2624
Examiner Name	Unknown
Attorney Docket Number	6338.140

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☐ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
  - ☐ Landscape Table on CD
- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☑ Other Enclosure(s) (please Identify below):
  See Remarks

Remarks

ELECTRONICALLY TRANSMITTED:
1. SB21 Transmittal Form (1 pg);
2. SB81 Power of Attorney (1 pg); and
3. SB96 Statement Under 37 CFR 3.73(b) (1 pg).

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	DUNLAP CODDING, P.C.		
Signature	Marc Brockhaus		
Printed name	Marc A. Brockhaus		
Date	09/06/2011	Reg. No.	40,923

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature	Marc Brockhaus		
Typed or printed name	Marc A. Brockhaus	Date	09/06/2011

This collection of information is required by 37 CFR 1.5. 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 1.11 and1.14. This collection is estimated to 2 hours 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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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

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/470,984	05/22/2009	Dale R. Thornberry	6338.140

CONFIRMATION NO. 4950

30589
DUNLAP CODDING, P.C.
PO BOX 16370
OKLAHOMA CITY, OK 73113

POA ACCEPTANCE LETTER

OC00000049779515

Date Mailed: 09/13/2011

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 09/06/2011.

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.

/fstephanos/

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

UNITED STATES PATENT AND TRADEMARK OFFICE

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United States Patent and Trademark Office
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/470,984	05/22/2009	Dale R. Thornberry	020283-000011

CONFIRMATION NO. 4950

POWER OF ATTORNEY NOTICE

30565
Woodard, Emhardt, Moriarty, McNett & Henry LLP
111 Monument Circle, Suite 3700
Indianapolis, IN 46204-5137

OC000000049779506

Date Mailed: 09/13/2011

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 09/06/2011.

- 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).

/fstephanos/

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/470,984	05/22/2009	Dale R. Thornberry	6338.140	4950

30589 7590 03/19/2012

DUNLAP CODDING, P.C.
PO BOX 16370
OKLAHOMA CITY, OK 73113

EXAMINER	
FITZPATRICK, ATIBA O	
ART UNIT	PAPER NUMBER
2624	
MAIL DATE	DELIVERY MODE
03/19/2012	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)	
	12/470,984	THORNBERRY ET AL.	
	Examiner	Art Unit	
	ATIBA O. FITZPATRICK	2624	

-- 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 *1* 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 *09 March 2010*.

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

3)☐ 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.

4)☐ 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

5)☒ Claim(s) *1-33* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☐ Claim(s) _____ is/are rejected.

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

9)☒ Claim(s) *1-33* are subject to restriction and/or election requirement.

Application Papers

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

11)☐ The drawing(s) filed on _____ 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).

12)☐ 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

13)☐ 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 _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-17, drawn to "Creating an electronic drawing first layer over said imagery; Creating an electronic drawing second layer over said imagery; In creating said first layer and said second layer, in computer memory: (a) substantially overlapping at least a segment of line A from said first layer with at least a segment of line E from said second layer; and, (b) assigning a first non-dimensional attribute to said line A; and, (c) assigning a second non-dimensional attribute to line E, wherein said first non-dimensional attribute is different from said second non-dimensional attribute", classified in class 382, subclass 100.

II. Claims 18-22 and 24, drawn to "wherein a deliverable to a client includes an interactive computer file, said interactive computer file including: at least one user pitch field enabling a client with said interactive file to enter at least one pitch numeric value corresponding to roof pitch of said first roof plane, wherein an area operator may automatically recalculate area of said first roof plane based on said pitch field value", classified in class 73, subclass 170.27.

III. Claims 23 and 25-33, drawn to "Providing at least one computer input field for a user to input first location data generally corresponding to the

location of the building; On said imagery of a region providing a visual marker that is moveable on said computer monitor around said region, said marker initially corresponding to said first location data, wherein said marker may be moved to a final location on top of the building to more precisely identify the location of the building roof structure; Providing a computer input capable of signaling user-acceptance of the final location of said marker", classified in class 250, subclass 340.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination II has separate utility such as automatically recalculating area of said first roof plane based on said pitch field value. See MPEP § 806.05(d).

Inventions II and III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination II has separate utility such as automatically recalculating area of said first roof plane based on said pitch field value. See MPEP § 806.05(d).

Inventions I and III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in

scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination III has separate utility such as providing a visual marker that is moveable on said computer monitor around said region, said marker initially corresponding to said first location data. See MPEP § 806.05(d).

The examiner has required restriction between subcombinations usable together. Where applicant elects a subcombination and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and/or examination burden if restriction were not required because at least the following reason(s) apply:

(a) the inventions have acquired a separate status in the art in view of their different classification;

(b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;

(c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries); and

(d) the prior art applicable to one invention would not likely be applicable to another invention.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a invention to be examined even though the requirement may be traversed (37 CFR 1.143) **and (ii) identification of the claims encompassing the elected invention**.

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable

over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ATIBA O. FITZPATRICK whose telephone number is (571)270-5255. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samir A. Ahmed can be reached on (571)272-7413. 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.

/ATIBA O FITZPATRICK/
Primary Examiner, Art Unit 2624

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12470984	THORNBERRY ET AL.
	Examiner	Art Unit
	ATIBA O FITZPATRICK	2624

✓	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	03/13/2012								
	1	÷								
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Electronically Filed on May 7, 2012 **PATENT**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.	:	**12/470,984**
Confirmation No.	:	**4950**
Applicant(s)	:	**Dale R. Thornberry**
Filed	:	**05/22/2009**
TC/A.U.	:	**2624**
Examiner	:	**Atiba O. Fitzpatrick**
Title	:	**System and Process for Roof Measurement Using Aerial Imagery**
Docket No.	:	**6338.140**
Customer No.	:	**30589**

Non-Fee Amendment
Commissioner for Patents
Electronically Transmitted

ELECTION/RESTRICTION

The following is being submitted in response to the Election/Restriction requirement mailed March 19, 2012:

Amendment to the Claims are reflected in the listing of claims which begin on page 2 of this paper.

Remarks begin on page 5 of this paper.

Listing of Claims:

The following listing of claims supercedes and replaces all prior versions in the patent application.

Claims 1-22 (Cancelled)

23. (Original) A process for determining attributes of a roof structure of a real-world three-dimensional building, comprising the acts of:

Providing at least one computer input field for a user to input first location data generally corresponding to the location of the building;

Providing visual access to digital aerial imagery of a region including the roof structure of the building corresponding to said first location data;

On said imagery of a region providing a visual marker that is moveable on said computer monitor around said region, said marker initially corresponding to said first location data, wherein said marker may be moved to a final location on top of the building to more precisely identify the location of the building roof structure;

Providing a computer input capable of signaling user-acceptance of the final location of said marker.

24. (Cancelled)

25. (Previously Presented) The process of claim 23 and wherein said first

location data comprised street address data, and wherein said final location is translated to latitude and longitude coordinates.

26. (Previously Presented) The process of claim 25 and wherein said aerial imagery is from a first imagery database from which said final location is selected and is internet-based imagery having a corresponding street address look up field, and further comprising the act of:

using said latitude and longitude coordinates to access imagery from a second imagery database.

27. (Previously Presented) The process of claim 26 and further comprising the act of:

generating, in computer memory, outline drawings around outlines corresponding to roof planes based on tracing from said imagery from said second imagery database.

28. (Previously Presented) The process of claim 27 and wherein said providing acts are provided over an internet interface.

29. (Previously Presented) The process of claim 28 and further comprising the act of:

providing a printed report that includes an aerial image of the building roof structure.

30. (Previously Presented) The process of claim 23 and further comprising the act of:

generating, in computer memory, outline drawings around outlines corresponding to roof planes based on tracing from said imagery from said second imagery database.

31. (Previously Presented) The process of claim 23 and wherein said providing acts are provided over an internet interface.

32. (Previously Presented) The process of claim 23 and further comprising the act of:

providing a printed report that includes an aerial image of the building roof structure.

33. (Previously Presented) The process of claim 32 and wherein the printed report includes a latitude reference and/or a longitude reference corresponding to the location of the building roof structure.

REMARKS

In the Election/Restriction Requirement mailed March 19, 2012, the Examiner stated that claims 1-33 were subject to an Election/Restriction requirement. In this regard, it was stated that the application contains claims directed to the following patentably distinct inventions:

Invention I: Claims 1-17, drawn to "Creating an electronic drawing first layer over said imagery; Creating an electronic drawing second layer over said imagery; In creating said first layer and said second layer, in computer memory: (a) substantially overlapping at least a segment of line A from said first layer with at least a segment of line E from said second layer; and, (b) assigning a first non-dimensional attribute to said line A; and, (c) assigning a second non-dimensional attribute to line E, wherein said first non-dimensional attribute is different from said second non-dimensional attribute", classified in class 382, subclass 100.

Invention II: Claims 18-22 and 24, drawn to "wherein a deliverable to a client includes an interactive computer file, said interactive computer file including: at least one user pitch field enabling a client with said interactive file to enter at least one pitch numeric value corresponding to roof pitch of said first roof plane, wherein an area operator may automatically

recalculate area of said first roof plane based on said pitch field value", classified in class 73, subclass 170.27.

Invention III: Claims 23 and 25-33, drawn to "Providing at least one computer input field for a user to input first location data generally corresponding to the location of the building; On said imagery of a region providing a visual marker that is moveable on said computer monitor around said region, said marker initially corresponding to said first location data, wherein said marker may be moved to a final location on top of the building to more precisely identify the location of the building roof structure; Providing a computer input capable of signaling user-acceptance of the final location of said marker", classified in class 250, subclass 340.

Applicant hereby elects Invention III, i.e., claims 23 and 25-33, without traverse. The claims readable thereon are claims 23 and 25-33. The claims directed to the non-elected inventions, i.e., claims 1-17 and 18-22 and 24 have been cancelled from consideration in the instant application.

CONCLUSION

The foregoing is intended to be a complete response to the election requirement mailed March 19, 2012. Examination on the merits is respectfully requested. Should the Examiner have any questions or comments regarding the foregoing, Applicant's attorney would welcome a telephonic interview with the Examiner.

Respectfully submitted,



Marc A. Brockhaus, Reg. No. 40,923
DUNLAP CODDING, P.C.
P.O. Box 16370
Oklahoma City, Oklahoma 73113
Telephone: 405/607-8600
Facsimile: 405/607-8686

Attorney for Applicant(s)

Electronically Transmitted: 05/07/2012 **PATENT**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.	:	**12/470,984**
Applicant(s)	:	**Dale R. Thornberry**
Filed	:	**05/22/2009**
TC/Au	:	**2624**
Examiner	:	**Atiba O. Fitzpatrick**
Title	:	**SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY**
Docket No.	:	**6338.140**
Customer No.	:	**30589**

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

SEVENTH SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

List of Sections Forming Part of This Information Disclosure Statement

The following sections are being submitted for this Information Disclosure Statement:

1. [X] Preliminary Statements
2. [X] Form PTO-1449 (Modified)
3. [X] Copies of Listed Information Items Accompanying this Statement
4. [ ] Concise Explanation of English Language Listed Information Items (Optional)
5. [X] Identification of Person(s) Making this Information Disclosure Statement

Section 1. Preliminary Statements

Applicants submit herewith patents, publications or other information of which they are aware, which they believe may be material to the examination of this application and in respect of which there may be a duty to disclose.

The filing of this information disclosure statement shall not be construed as a representation that a search has been made (37 C.F.R. § 1.97(g)), an admission that the information cited is, or is considered to be, material to patentability or that no other material information exists.

The filing of this information disclosure statement shall not be construed as an admission against interest in any manner. Notice of January 9, 1992, 1135 O.G. 13-25, at 25.

Section 2. Form PTO-1449 (Modified)

[X] A completed Form PTO-1449 (Modified) is attached hereto.

[ ] No Form 1449 (Modified) is attached.

Section 3. Copies of Listed Information Items Accompanying this Statement

[X] As this application is being filed after June 30, 2003, no copies of cited U.S. patents or patent application publications are submitted herewith.

Section 4. Concise Explanation of English Language Listed Information Items (OPTIONAL)

Section 5. Identification of Person(s) Making this INFORMATION DISCLOSURE STATEMENT

The person making this statement is the attorney who signs below on the basis of the information:

[ ] supplied by the inventor(s)

[ ] supplied by an individual associated with the filing and prosecution of this application (37 C.F.R. § 1.56(c)).

[X] in the attorney's file

Respectfully submitted,



Marc A. Brockhaus
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Attorney for Applicant(s)

ELECTRONICALLY FILED ON: 05/07/2012

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

Substitute for form PTO/SB/08a

SEVENTH SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	12/470,984
Filing Date	05/22/20009
First Named Inventor	Dale R. Thornberry
Art Unit	2624
Examiner Name	Atiba O. Fitzpatrick
Attorney Docket Number	6338.140

U. S. PATENT DOCUMENTS

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

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.	2007/0150366		06/28/2007	Yahiro et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	County code[2]	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	T[5]

NON-PATENT LITERATURE DOCUMENTS

Examiner Initial*	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]

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 Patent Application Fee Transmittal

Application Number:	12470984
Filing Date:	22-May-2009
Title of Invention:	SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY
First Named Inventor/Applicant Name:	Dale R. Thornberry
Filer:	Marc Alan Brockhaus/Lori Radford
Attorney Docket Number:	6338.140

Filed as Small 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:				
Extension - 1 month with $0 paid	2251	1	75	75

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
			Total in USD ($)	**75**

Electronic Acknowledgement Receipt

EFS ID:	12719137
Application Number:	12470984
International Application Number:	
Confirmation Number:	4950
Title of Invention:	SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY
First Named Inventor/Applicant Name:	Dale R. Thornberry
Customer Number:	30589
Filer:	Marc Alan Brockhaus/Lori Radford
Filer Authorized By:	Marc Alan Brockhaus
Attorney Docket Number:	6338.140
Receipt Date:	07-MAY-2012
Filing Date:	22-MAY-2009
Time Stamp:	16:00:17
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$75
RAM confirmation Number	2820
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)

1	Transmittal Letter	6338140_Transmittal05072012.pdf	67614 9f9458cc73a3504e9cf66ba2ae2c7ce0d94199c8	no	1
Warnings:					
Information:					
2	Extension of Time	6338140_Extension05072012.pdf	63275 5c720aeb6e283c2ee1130f8a57c8525ea02796c2	no	1
Warnings:					
Information:					
3		6338140_ElectionRestriction.pdf	170050 909f2e4d291ca7a4b90fcc84de140563443e16ff	yes	7

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Response to Election / Restriction Filed	1	1
Claims	2	4
Applicant Arguments/Remarks Made in an Amendment	5	7

Warnings:					
Information:					
4	Transmittal Letter	6338140_IDSltr.pdf	82228 8cd4b353bc7e0d3e39a7a9179ac29b11ea961d0a	no	3
Warnings:					
Information:					
5	Information Disclosure Statement (IDS) Form (SB08)	6338140_IDSSB08.pdf	60076 ac73d1160caf79cb9550458292d3009506b12c06	no	1
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
6	Fee Worksheet (SB06)	fee-info.pdf	30577 ff3f0ef63fd7043f188039bb99846c9709787c39	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	473820		

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.

Doc Code: TRAN.LET

Document Description: Transmittal Letter

PTO/SB/21 (07-09)
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 displays a valid OMB control number.

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission	

Application Number	12/470,984
Filing Date	05/22/2009
First Named Inventor	Dale R. Thornberry et al.
Art Unit	2624
Examiner Name	Atiba O. Fitzpatrick
Attorney Docket Number	6338.140

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☑ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☑ Extension of Time Request
- ☐ Express Abandonment Request
- ☑ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
  - ☐ Landscape Table on CD
- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☑ Other Enclosure(s) (please Identify below):
  See Remarks

Remarks

ELECTRONICALLY TRANSMITTED:
1. SB21 Transmittal Form (1 pg);
2. Sb22 Extension of Time (1 pg);
3. Election/Restriction (7 pgs);
4. Seventh Supplemental Information Disclosure Statement (3 pgs); and
5. Substitute for form PTO/SB/08a (1 pg).

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	DUNLAP CODDING, P.C.		
Signature	Marc Brockhaus		
Printed name	Marc A. Brockhaus		
Date	05/07/2012	Reg. No.	40,923

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature	Marc Brockhaus		
Typed or printed name	Marc A. Brockhaus	Date	05/07/2012

This collection of information is required by 37 CFR 1.5. 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 1.11 and1.14. This collection is estimated to 2 hours 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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PTO/SB/22 (09-11)
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PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)	Docket Number (Optional) 6338.140
Application Number 12/470,984	Filed 05/22/2009
For SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY	
Art Unit 2624	Examiner Atiba O. Fitzpatrick

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above identified application.

The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):

	Fee	Small Entity Fee	
☑ One month (37 CFR 1.17(a)(1))	$150	$75	$ 75.00
☐ Two months (37 CFR 1.17(a)(2))	$560	$280	$
☐ Three months (37 CFR 1.17(a)(3))	$1270	$635	$
☐ Four months (37 CFR 1.17(a)(4))	$1980	$990	$
☐ Five months (37 CFR 1.17(a)(5))	$2690	$1345	$

☑ Applicant claims small entity status. See 37 CFR 1.27.

☐ A check in the amount of the fee is enclosed.

☑ Payment by credit card. Form PTO-2038 is attached.

☐ The Director has already been authorized to charge fees in this application to a Deposit Account.

☐ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number _____.

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.

I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed (Form PTO/SB/96).

☑ attorney or agent of record. Registration Number 40,923

☐ attorney or agent under 37 CFR 1.34.
Registration number if acting under 37 CFR 1.34 _____

Marc Brockhaus
Signature

05/07/2012
Date

Marc A. Brockhaus
Typed or printed name

405-607-8600
Telephone Number

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☐ Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.136(a). 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 1.11 and 1.14. This collection is estimated to take 6 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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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/470,984	05/22/2009	Dale R. Thornberry	6338.140	4950

30589 7590 05/22/2012

DUNLAP CODDING, P.C.
PO BOX 16370
OKLAHOMA CITY, OK 73113

EXAMINER	
FITZPATRICK, ATIBA O	
ART UNIT	PAPER NUMBER
2624	
MAIL DATE	DELIVERY MODE
05/22/2012	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)	
	12/470,984	THORNBERRY ET AL.	
	Examiner	Art Unit	
	ATIBA O. FITZPATRICK	2624	

-- 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 *07 May 2012*.

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

3)☐ 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.

4)☐ 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

5)☒ Claim(s) *23 and 25-33* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *23 and 25-33* is/are rejected.

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

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

Application Papers

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

11)☒ The drawing(s) filed on *22 May 2009* 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).

12)☐ 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

13)☐ 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 *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :05/22/2009, 01/19/2010, 02/12/2010, 03/09/2010, 02/16/2011, 03/04/2011, 05/07/2012

DETAILED ACTION

Claim Rejections - 35 USC § 112

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

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

Claim 30 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 30 recites the limitation "said second imagery database" in the last line. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

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

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

Claims 23 and 25-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 20100110074 (Pershing) in view of US 20060200311 (Arutunian).

As per claim 23, Pershing teaches a process for determining attributes of a roof structure of a real-world three-dimensional building, comprising the acts of: providing at least one computer input field for a user to input first location data generally corresponding to the location of the building **(Pershing: para 23: “providing an**

address of the building"; para 29; para 61: "user interface screen 400 shows a roof modeling project in an initial state, after the operator has specified an address of a building"; para 107: "the interface engine 814 provides an interactive graphical user interface that can be used by a human user operating the operator computing system 865 to interact with, for example, the roof modeling engine 812, to perform functions related to the generation of models, such as point registration, feature indication, pitch estimation, etc. In other embodiments, the interface engine 814 provides access directly to a customer operating the customer computing system 860, such that the customer may place an order for a roof estimate report for an indicated building location"; Fig. 1: 120, 133);

Providing visual access to digital aerial imagery of a region including the roof structure of the building corresponding to said first location data **(Pershing: See arguments and citations offered in addressing the preceding claims; Also see para 24: "display of a model of a roof, possibly in conjunction with one or more images of the roof, so that an operator may review the model for accuracy and possibly make adjustments and/or corrections to the roof model. In other embodiments, all or some of the functions of the roof estimation system may be performed automatically. For example, image registration may include automatically identifying building features for the placement of reference markers. Further, roof model generation may include automatically recognizing features, dimensional attributes, and/or pitches of various planar roof sections of the roof". Note that markers are automatically placed on retrieved image relative to provided**

address);

On said imagery of a region providing a visual marker that is moveable on said computer monitor around said region, said marker initially corresponding to said first location data, wherein said marker may be moved to a final location on top of the building to more precisely identify the location of the building roof structure **(Pershing: para 63: placed markers are manipulated by user; para 69: "operator has moved each of markers 420-423 to a corner of the roof 407"; para 81: marker moved by operator to roof; para 83: "marker 520 may be moved and/or adjusted so that it appears to lie substantially atop two adjacent planar sections of roof")**;

Providing a computer input capable of signaling user-acceptance of the final location of said marker **(Pershing: para 69: "selected by the operator"; para 81: "moved by operator". Note that by manually selecting locations for markers and for subsequent processing, the operator is signaling acceptance of the location)**.

Arutunian teaches providing at least one computer input field for a user to input first location data generally corresponding to the location of the building **(Arutunian: para 27: "Some of the options provided to users from the home page may include viewing an aerial image of the user's own home (e.g., by entering address information into text fields)"; paras 46, 47, 60, 70, 71, 73)**.

Thus, it would have been obvious for one of ordinary skill in the art at the time the invention was made to implement the teachings of Arutunian into Pershing since

Pershing suggests a web enabled interface allowing a user to provide address information of a home in order to view associated aerial images in general and Arutunian suggests the beneficial use of a web enabled interface allowing a user to provide address information of a home in order to view associated aerial images wherein the address is input into a field in the analogous art of image processing. One of ordinary skill in the art at the time the invention was made would have recognized that inputting data into a field has the benefit of effective and efficient data entry including correction/editing prior to submission. The teachings of Arutunian can be incorporated into Pershing in that the address is input into a field. Furthermore, one of ordinary skill in the art at the time the invention was made could have combined the elements as claimed by known methods and, in combination, each component functions the same as it does separately. One of ordinary skill in the art at the time the invention was made would have recognized that the results of the combination would be predictable.

As per claim 25, Pershing in view of Arutunian teaches the process of claim 23 and wherein said first location data comprised street address data, and wherein said final location is translated to latitude and longitude coordinates **(Pershing: See arguments and citations offered in rejecting claim 24 above: para 29: "providing an indicator of the location of the specified building (e.g., street address, GPS coordinates, lot number, etc.) to the image source 110… the image source geo-codes a provided**

street address into latitude and longitude coordinates, which are then used to look up (e.g., query a database) aerial images of the provided street address").

As per claim 26, Pershing in view of Arutunian teaches the process of claim 25 and wherein said aerial imagery is from a first imagery database from which said final location is selected and is internet-based imagery having a corresponding street address look up field **(Pershing: See arguments and citations offered in rejecting claim 25 above: para 112: "databases… one or more database systems"; paras 29, 102)** and further comprising the act of:

using said latitude and longitude coordinates to access imagery from a second imagery database **(Pershing: See arguments and citations offered in rejecting claim 25 above: para 29: "obtains one or more aerial images of the specified building by, for example, providing an indicator of the location of the specified building (e.g., street address, GPS coordinates, lot number, etc.) to the image source 110. In response, the image source 110 provides to the image acquisition engine 101 the one or more aerial images of the building… the image source geo-codes a provided street address into latitude and longitude coordinates, which are then used to look up (e.g., query a database) aerial images of the provided street address"; paras 102, 112)**.

Note that the claim requires no interpretation about the order of databases as first and second denote separate databases. Never-the-less, it would have been obvious for one

of ordinary skill in the art at the time the invention was made to change the order of databases, since selection of any order of performing steps is prima facie obvious in the absence of new or unexpected results. In re Gibson, 39 F.2d 975, 5 USPQ 230 (CCPA 1930) (MPEP 2144.04 IV: C).

As per claim 27, Pershing in view of Arutunian teaches the process of claim 26 and further comprising the act of: generating, in computer memory, outline drawings around outlines corresponding to roof planes based on tracing from said imagery from said second imagery database **(Pershing: See arguments and ciations offered in rejecting claims 26 above; para 39: "roof and/or roof section perimeter dimensions and/or outlines"; para 82: "information about the planar roof section, such as its outline"; para 88: "trace or outline planar sections of the roof"; para 119: "roof estimation system to trace"; para 133: "outline of a section of the roof, etc. In one embodiment, the operator utilizes a drawing tool to indicate roof section corner points"; para 134: "outline or perimeter of the planar roof"; paras 64, 66, 68, 70, 73, 80, 81)**.

As per claim 28, Pershing in view of Arutunian teaches the process of claim 27 and wherein said providing acts are provided over an internet interface **(Pershing: See arguments and citations offered in rejecting claim 23 above: paras 43, 46, 102, 107, 108, 112, 113)**.

As per claim 29, Pershing in view of Arutunian teaches the process of claim 28 and further comprising the act of: providing a printed report that includes an aerial image of the building roof structure **(Pershing: See arguments and citations offered in rejecting claim 23 above: paras 23, 28, 51, 52)**.

As per claim 30, Pershing in view of Arutunian teaches the process of claim 23 and further comprising the act of: generating, in computer memory, outline drawings around outlines corresponding to roof planes based on tracing from said imagery from said second imagery database **(Pershing: See arguments and ciations offered in rejecting claims 26 above; para 39: "roof and/or roof section perimeter dimensions and/or outlines"; para 82: "information about the planar roof section, such as its outline"; para 88: "trace or outline planar sections of the roof"; para 119: "roof estimation system to trace"; para 133: "outline of a section of the roof, etc. In one embodiment, the operator utilizes a drawing tool to indicate roof section corner points"; para 134: "outline or perimeter of the planar roof"; paras 64, 66, 68, 70, 73, 80, 81)**.

As per claim 31, Pershing in view of Arutunian teaches the process of claim 23 and wherein said providing acts are provided over an internet interface **(Pershing: See arguments and citations offered in rejecting claim 23 above: paras 43, 46, 102, 107, 108, 112, 113)**.

As per claim 32, Pershing in view of Arutunian teaches the process of claim 23 and further comprising the act of: providing a printed report that includes an aerial image of the building roof structure **(Pershing: See arguments and citations offered in rejecting claim 23 above: paras 23, 28, 51, 52)**.

As per claim 33, Pershing in view of Arutunian teaches the process of claim 32 and wherein the printed report includes a latitude reference and/or a longitude reference corresponding to the location of the building roof structure **(Pershing: See arguments and citations offered in rejecting claim 32 above: paras 39, 121; also see paras 10, 23, 40, 41, 51,106)**.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Atiba Fitzpatrick whose telephone number is (571) 270-5255. The examiner can normally be reached on M-F 10:00am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Repko can be reached on (571) 272-8624. The fax phone number for Atiba Fitzpatrick is (571) 270-6255.

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.

Atiba Fitzpatrick

/ATIBA O FITZPATRICK/

Examiner, Art Unit 2624

PTO/SB/08a (09-06)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 1

Complete if Known	
Application Number	12/470,984
Filing Date	05-22-09
First Named Inventor	Dale R. Thornberry
Art Unit	2624
Examiner Name	Unknown
Attorney Docket Number	020283-000011

U.S. PATENT DOCUMENTS

Examiner Initial *	Cite No. 1	Document Number Number	Kind Code[2] (if known)	Publication Date MM-DD-YY	Name of Patentee or Applicant of Cited Document	Pages, columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	US-2003/0014224		01-16-03	Guo et al.	
	2	US-2005/0038636		02-17-05	Wakelam et al.	
	3	US-2006/0282235		12-14-06	Thomas et al.	
	4	US-5,319,541		06-07-94	Blanchard et al.	
	5	US-5,625,827		04-29-97	Krause et al.	
	6	US-6,766,282		07-20-04	Schettine	
	7	US-6,859,768		02-22-05	Wakelam et al.	
	8	US-7,164,883		01-16-07	Rappaport et al.	
	9	US-7,305,983		12-11-07	Meder et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initial *	Cite No. 1	Foreign Patent Document Country[3] Code	Number[4] Kind Code (if known)[5]	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]
	10	WO	20000029806	05-25-00	Friedhelm et al.		

Examiner Signature	/Atiba Fitzpatrick/	Date Considered	05/19/2012

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

1. Applicant's unique citation designation number (optional) 2. See Kinds codes of USPTO patent Documents. at www.uspto.gov or MPEP 901.04.

3. Enter Office that isssued the document, by the two-letter code (WIPO Standard ST.3.) 4. For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.f 16 if possible. 6. Applicant is to place a check mark here if English language Translation is attached.

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

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /A.F./

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 2

Complete if Known	
Application Number	12/470,984
Filing Date	May 22, 2009
First Named Inventor	Dale R. Thornberry
Art Unit	2624
Examiner Name	
Attorney Docket Number	020283-000011

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
	1	US- 20100110074 i	05-06-2010	Chris Pershing	
		US-			
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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]
	2	AU2008230031	11-05-2009	David P. Carlson, et al		

Examiner Signature	/Atiba Fitzpatrick/	Date Considered	05/19/2012

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /A.F./

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 2 of 2

Complete if Known	
Application Number	12/470,984
Filing Date	May 22, 2009
First Named Inventor	Dale R. Thornberry
Art Unit	2624
Examiner Name	
Attorney Docket Number	020283-000011

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]
	3	U.S. Provisional Application 61/197,904 related to U.S. Patent Application, Serial No. 2010/0110074 published May 6, 2010.	

Examiner Signature	/Atiba Fitzpatrick/	Date Considered	05/19/2012

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

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

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PTO/SB/08a (07-09)
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U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
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Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 3

Complete if Known	
Application Number	12/470,984
Filing Date	05-22-09
First Named Inventor	Dale R. Thornberry
Art Unit	
Examiner Name	
Attorney Docket Number	020283-000011

U.S. PATENT DOCUMENTS

Examiner initial *	Cite No. 1	Document Number Number	Kind Code2 (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
	1	US-2008/0105045		05-08-2008	Woro	
	2	US-2008/0221843		09-11-2008	Shenkar et al.	
	3	US-2010/0114537		05-06-2010	Pershing	
	4	US-2010/0179787		07-15-2010	Pershing et al	
	5	US-5,633,995		05-27-1997	McClain	
	6	US-6,396,491		05-28-2002	Watanabe et al.	
	7	US-6,496,184		12-17-2002	Freeman et al.	
	8	US-6,980,690		12-27-2005	Taylor et al.	
	9	US-7,324,666		01-29-2008	Zoken et al.	
	10	US-7,343,268		03-11-2008	Kishikawa	

FOREIGN PATENT DOCUMENTS

Examiner Initial *	Cite No. 1	Foreign Patent Document Country3 Code	Number4 Kind Code (if known)5	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, columns, Lines, Where Relevant Passages or Relevant Figures Appear	T6
	11	AU	2010219392 A1	09-30-2010	Eagle View Technologies, Inc.		

Examiner Signature	/Atiba Fitzpatrick/	Date Considered	05/19/2012

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1. Applicant's unique citation designation number (optional) 2. See Kinds codes of USPTO patent Documents. at www.uspto.gov or MPEP 901.04.

3. Enter Office that isssued the document, by the two-letter code (WIPO Standard ST.3.) 4. For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.f 16 if possible. 6. 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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Sheet 2 of 3

Complete if Known	
Application Number	12/470,984
Filing Date	05-22-09
First Named Inventor	Dale R. Thornberry
Group Art Unit	
Examiner Name	
Attorney Docket Number	020283-000011

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner initial *	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
	12	"Automatic House Reconstruction", http://www.vision.ee.ethz.ch/projects/Amobe_l/recons.html, accessed 3/15/2010	
	13	"PhotoModeler--Measure and Model Real-World Objects From Photographs", http://www.photomodeler.com/products/photomodeler.htm, accessed on 03/15/2010.	
	14	Baillard C. et al., "Automatic Reconstruction Of Piecewise Planar Models From Multiple Views", Dept. of Engineering Science, University of Oxford	
	15	Bignone, Frank, et al., "Automatic Extraction of Generic House Roofs From High Resolution Aerial Imagery", Swiss Federal Institute of Technology ETH, Switzerland.	
	16	Chevrier C., et al., "Interactive 3D Reconstruction For Urban Areas: An Image Based Tool", CAAD Futures 2001.pp. 1-13.	
	17	Debevec, Paul E. et al., "Modeling and Rendering Architecture From Photographs: A Hybrid Geometry-And-Image Based Approach", University of California at Berkeley, 1996.	
	18	Delaney, Kevin J., "Searching For Clients From Above", The Wall Street Journal, July 31, 2007.	
	19	Faugeras et al., "3-D Reconstruction of Urban Scenes From Image Sequences", INRIA, 2004, France, Sept. 11, 1997.	
	20	Henricsson, O. et al., "3-D Building Reconstruction with ARUBA: A Qualitative and Quantitative Evaluation," Institute of Geodesy and Photogrammetry, Switzerland, 1997, 12 pages.	
	21	http://www.precigeo.com/, "Solar Professionals, Insurance Adjusters, Roofing and Landscape Estimators: Use Precigeo To Get Rapid, Accurate and Visually Compelling SKetches and Measurements, accessed on 3/15/10.	
	22	Noronha, S. et al., "Detection and Modeling of Buildings From Multiple Aerial Images", Institute for Robotics and intelligent Systems, University of Southern California.	

Examiner Signature	/Atiba Fitzpatrick/	Date Considered	05/19/2012

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Sheet 3 of 3

Complete if Known	
Application Number	12/470,984
Filing Date	05-22-09
First Named Inventor	Dale R. Thornberry
Group Art Unit	
Examiner Name	
Attorney Docket Number	020283-000011

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner initial *	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
	23	Poullis et al., "Photogrammetric Modeling And Image-Based Rendering For Rapid Virtual Environment Creation", University of Souithern California, Institute For Creative Technologies,	
	24	Scholze, Stephan, "A Probabilistic Approach To Building Roof Reconstruction", A Dissertation Submitted To The Swiss Federal Institute Of Technology Zurich, 2002.	
	25	Ziegler et al., 3D Reconstruction Using Labeled Image Regions, Eurographics Symposium on Geometry Processing, 2003.	

Examiner Signature	/Atiba Fitzpatrick/	Date Considered	05/19/2012

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 1

Complete if Known	
Application Number	12/470,984
Filing Date	05-22-09
First Named Inventor	Dale R. Thornberry
Art Unit	2624
Examiner Name	
Attorney Docket Number	020283-000011

U.S. PATENT DOCUMENTS

Examiner initial *	Cite No. 1	Document Number Number	Kind Code[2] (if known)	Publication Date MM-DD-YY	Name of Patentee or Applicant of Cited Document	Pages, columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	US-2002/0154174		10-24-02	Redlich et al.	
	2	US-2005/0288959		12-29-05	Eraker et al.	
	3	US-2006/0200311		09-07-06	Arutunian et al.	
	4	US-2009/0132436		05-21-09	Pershing et al.	
	5	US-6,323,885		11-27-01	Wiese	
	6	US-6,385,541		05-07-02	Blumberg et al.	
	7	US-6,446,053		09-03-02	Elliott	
	8	US-6,636,803		10-21-03	Hartz Jr. et al.	
	9	US-6,836,270		12-28-04	Du	
	10	US-7,003,400		02-21-06	Bryant	
	11	US-7,006,977		02-28-06	Attra et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initial *	Cite No. 1	Foreign Patent Document Country[3] Code	Number[4] Kind Code (if known)[5]	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]

Examiner Signature	/Atiba Fitzpatrick/	Date Considered	05/19/2012

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1. Applicant's unique citation designation number (optional) 2. See Kinds codes of USPTO patent Documents. at www.uspto.gov or MPEP 901.04.
3. Enter Office that isssued the document, by the two-letter code (WIPO Standard ST.3.) 4. For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.f 16 if possible. 6. Applicant is to place a check mark here if English language Translation is attached.

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Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12470984	THORNBERRY ET AL.
	Examiner	Art Unit
	ATIBA O FITZPATRICK	2624

✓	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	03/13/2012	05/19/2012							
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	31	÷	✓							
	32	÷	✓							
	33	÷	✓							

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	42	("5319541" | "6859768" | "20100110074" | "6496184" | "20070150366" | "5699444" | "5625827" | "6636803" | "6798925" | "20060282235" | "7305983" | "6446053" | "7133551" | "20100114537" | "20100179787" | "5633995" | "6980690" | "7324666" | "7085400" | "20030014224" | "20020154174" | "20060200311" | "20090132436" | "7003400" | "6396491" | "7239761" | "20050038636" | "7343268" | "20080262789" | "4497551" | "7133570" | "6766282" | "7164883" | "20080221843" | "5995765" | "7046839" | "20050288959" | "6323885" | "6385541" | "6836270" | "7006977" | "20080105045").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/05/19 17:14
L2	11	L1 and (field) with (address$4 position$5 locat$4 placed placement placing situating situated point coordinat$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 17:14
L3	11	L1 and (accept$4 confirm$4 approv$4 affirm$4 authoriz$5) with (address$4 position$5 locat$4 placed placement placing situating situated point coordinat$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 17:14
L4	8	L2 not L3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 17:14
L5	3	(US-20060200311-$ or US-20020154174-$).did. or (US-6636803-$).did.	US-PGPUB; USPAT	OR	ON	2012/05/19 17:24
L6	0	5 and roof	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 17:24
L13	29	1 and ("382"/$, "345"/$, "703"/$, "715"/$, "340"/$).ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2012/05/19 18:41

			IBM_TDB			
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S3	1	(THORNBERRY-DALE$, THORNBERRY-CHRIS$, GARRINGER-MARK$).in.	US-PGPUB; USPAT; USOCR	OR	ON	2012/05/16 21:45
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S5	13	S4 and (marker mark$3 index indicator tag$4 label$4 pin) near5 (moveable mov$3 chang$3 adjust$4 updat$3 alter$3 vary$3 modif$4 edit$4 calibrat$4 refin$4 tune tuning tuned fine$2tun$3 replac$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/17 10:16
S6	5	S5 and (provid$4 input$4 enter$4 entry) near5 (address$4 position$5 locat$4 placed placement placing situating situated point coordinat$4) and (address$4 position$5 locat$4 placed placement placing situating situated point coordinat$4) near5 (marker mark$3 index indicator tag$4 label$4 pin)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/17 10:18
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S8	29	S4 not S5	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/17 11:00
S18	2	roof with (image picture photograph$4 frame video) and (latitud$5 longitud$5) with (image picture photograph$4 frame video) with (plural$3 poly many several numerous various multi dual multiple (more NEAR2 than) two three first second third all any every each additional subsequent	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 14:58

		another next) near2 (database knowledge$3base)				
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S20	4	(US-20120120069-$ or US-20100179787-$ or US-20080262789-$).did. or (US-8145578-$).did.	US-PGPUB; USPAT	OR	ON	2012/05/19 15:02
S21	4	S20 and (plural$3 poly many several numerous various multi dual multiple (more NEAR2 than) two three first second third all any every each additional subsequent another next) near2 (database knowledge$3base)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 15:02
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S23	12	S22 and (plural$3 poly many several numerous various multi dual multiple (more NEAR2 than) two three first second third all any every each additional subsequent another next) near2 (database knowledge$3base)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 15:04
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S25	8	roof with (image picture photograph$4 frame video) and report$4 with (latitud$5 longitud$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 15:21
S26	8	(US-20100296693-$ or US-20070107620-$ or US-20050216147-$ or US-20030095789-$).did. or (US-7391956-$ or US-7246007-$	US-PGPUB; USPAT	OR	ON	2012/05/19 15:21

		or US-6625383-$ or US-6571052-$).did.				
S27	8	(US-20100296693-$ or US-20070107620-$ or US-20050216147-$ or US-20030095789-$).did. or (US-7391956-$ or US-7246007-$ or US-6625383-$ or US-6571052-$).did.	US-PGPUB; USPAT	OR	ON	2012/05/19 15:21
S28	8	S27 and report$4 with (latitud$5 longitud$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 15:22
S29	1	S22 and report$4 with (latitud$5 longitud$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 15:29
S30	20	S22 and (latitud$5 longitud$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 15:31
S31	1	"20100110074".pn. and report$4 with model$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 15:38
S32	34	S22 and (database knowledge$3base)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 15:48
S33	2	"20100110074".pn. and (outlin$4 contour$4 border$4 trac$4 arm$3 boundar$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 16:19
S34	11	S22 and (field) with (address$4 position$5 locat$4 placed placement placing situating situated point coordinat$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 16:50
S35	11	S22 and (accept$4 confirm$4 approv$4 affirm$4 authoriz$5) with (address$4 position$5 locat$4 placed placement placing situating situated point coordinat$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 16:51

S36	3	S34 and S35	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 16:52

5/19/2012 6:41:30 PM
C:\Users\afitzpatrick\Documents\EAST\Workspaces\12470984.wsp

ELECTRONICALLY FILED ON: 05/07/2012

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

Substitute for form PTO/SB/08a

SEVENTH SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	12/470,984
Filing Date	05/22/20009
First Named Inventor	Dale R. Thornberry
Art Unit	2624
Examiner Name	Atiba O. Fitzpatrick
Attorney Docket Number	6338.140

U. S. PATENT DOCUMENTS

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

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.	2007/0150366		06/28/2007	Yahiro et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number[3]	County code[2]	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	T[5]

NON-PATENT LITERATURE DOCUMENTS

Examiner Initial*	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]

EXAMINER SIGNATURE

Examiner Signature	/Atiba Fitzpatrick/	Date Considered	05/19/2012

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /A.F./

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12470984	THORNBERRY ET AL.
	Examiner	Art Unit
	ATIBA O FITZPATRICK	2624

SEARCHED

Class	Subclass	Date	Examiner
345	423-426	5/19/2012	/A.F./
703	1-9	5/19/2012	/A.F./
382	100-107	5/19/2012	/A.F./
715	835-838	5/19/2012	/A.F./
340	990-995.27	5/19/2012	/A.F./

SEARCH NOTES

Search Notes	Date	Examiner
EAST	5/19/2012	/A.F./
EAST	5/19/2012	/A.F./
EAST	5/19/2012	/A.F./
EAST	5/19/2012	/A.F./
EAST	5/19/2012	/A.F./

INTERFERENCE SEARCH

Class	Subclass	Date	Examiner

	/ATIBA O FITZPATRICK/ Primary Examiner.Art Unit 2624

PTO/SB/08b (06-09)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet | | of | |

Complete if Known	
Application Number	12/470,984
Filing Date	May 22, 2009
First Named Inventor	Thornberry, Dale
Art Unit	2624
Examiner Name	Unassigned
Attorney Docket Number	020283-000011

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]
	1	OLOF HENRICSSON, The Role of Color Attributes and Similarity Grouping in 3-D Building Reconstruction, Institute of Photogrammetry and Geodesy, Zurich, Switzerland	
	2	CC-Modeler: a topology generator for 3-D city models, abstract, May 15, 1998	
	3	ARMIN GRUEN and HINHUA WANG; CC-Modeler: A Topology Generator for 3-D City Models, Inst. of Geodesy and Photogrammetry, Zurich, Switzerland	
	4	MICROSOFT'S MSN VIRTUAL EARTH: The Map is the Search Platform; February 6, 2009	
	5	EAGLE VIEW TECHNOLOGIES; Eagle View Measurements Premium Report; October 22, 2008	

Examiner Signature	/Atiba Fitzpatrick/	Date Considered	05/19/2012

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Sheet 1 of 3

Complete if Known	
Application Number	New
Filing Date	05-22-09
First Named Inventor	Dale Thornberry
Art Unit	
Examiner Name	
Attorney Docket Number	020283-000011

U.S. PATENT DOCUMENTS

Examiner initial *	Cite No. 1	Document Number: Number	Document Number: Kind Code[2] (if known)	Publication Date MM-DD-YY	Name of Patentee or Applicant of Cited Document	Pages, columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	US-2008/0262789		10-23-08	Pershing	
	2	US-4,497,551		02-05-85	Lapeyre	
	3	US-5,699,444		12-16-97	Palm	
	4	US-5,995,765		11-30-99	Kaneko et al.	
	5	US-6,798,925		09-28-04	Wagman	
	6	US-7,046,839		05-16-06	Richer et al.	
	7	US-7,085,400		08-01-06	Holsing et al.	
	8	US-7,133,551		11-07-06	Chen et al.	
	9	US-7,133,570		11-07-06	Schreier et al.	
	10	US-7,239,761		07-03-07	Weilenmann	

FOREIGN PATENT DOCUMENTS

Examiner Initial *	Cite No. 1	Foreign Patent Document: Country[3] Code	Foreign Patent Document: Number[4] Kind Code (if known)[5]	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]

Examiner Signature	/Atiba Fitzpatrick/	Date Considered	05/19/2012

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1. Applicant´s unique citation designation number (optional) 2. See Kinds codes of USPTO patent Documents. at www.uspto.gov or MPEP 901.04.

3. Enter Office that isssued the document, by the two-letter code (WIPO Standard ST.3.) 4. For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.f 16 if possible. 6. 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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Sheet 2 of 3

Complete if Known	
Application Number	New
Filing Date	05-22-09
First Named Inventor	Dale Thornberry
Group Art Unit	
Examiner Name	
Attorney Docket Number	020283-000011

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner initial *	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]
	11	"Pictometry Announces Software and Web-based Solution For Engineers, Architects, and Planners", Press Release dated January 22, 2004, Rochester, NY.	
	12	Automated Systems Research, http://www.asrsoft.com/about.html, accessed 5/22/2009	
	13	Claim Rep Measure Roof, http://www.claimrep.com/roofSize.htm, accessed on 5/22/2009	
	14	GeoSpan Aerial Imagery, http://www.geospan.com/products-services.asp, accessed on 5/22/2009	
	15	GULCH, E., MULLER, H., LABE, T., RAGIA, L., "On The Performance Of Semi-Automatic Building Extraction", University Bonn, Germany, 1998.	
	16	How To Calculate Roof Pitches in 3D From 2D Drawings, http://connected.typepad.com/connected/2007/12/how-to-calculat.html, accessed on 5/22/2009	
	17	http://eagleviewmeasurements.com, "Eagle View Roof Measurement" accessed 5/22/2009	
	18	http://estimagic.com/roofing/about-roofing-estimating.html, "About Estimagic Roof Estimator", accessed 8/22/2008	
	19	MILLER, Mark R., "Miller's Guide To Framing And Roofing, McGraw-Hill Companies, Inc., New York, 2005, pp. 131-136, 162-163.	
	20	Pictometry Online Demo, www.youtube.com/watch?v=JURSK7o0OD0, accessed on 2/6/2009	
	21	Precigeo, http://www.precigeo.com/, accessed on 5/22/2009	

Examiner Signature	/Atiba Fitzpatrick/	Date Considered	05/19/2012

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 3 of 3

Complete if Known	
Application Number	New
Filing Date	05-22-09
First Named Inventor	Dale Thornberry
Group Art Unit	
Examiner Name	
Attorney Docket Number	020283-000011

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner initial *	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]
	22	Roof Area Calculator, http://www.construction-resource.com/calculators/roof-area.php, accessed on 5/22/2009	
	23	Roof Master Roof Estimating Software, http://www.vectortec.com/roofmaster_roofing_estimating_software.htm, accessed on 5/22/2009	
	24	RoofLogic Drawings and Takeoffs From Satellite Images, http://www.rooflogic.com/Products/Satellite/, accessed on 5/22/2009	
	25	SkyTek_Imaging, http://www.skytekimaging.com/ourservices.html, accessed on 5/22/2009	
	26	SNYDER, J., BARR, A., "Ray Tracing Complex Models Containing Surface Tessellations", California Institute of Technology, Pasadena, CA July 1987, pp. 119-128.	
	27	Somay Roof Calculator, http://www.somay.com/roof_coatings/roof_calculate/roof_calculate.html, accessed on 5/22/2009	
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	29	Ways To Determine or Calculate Roof Pitch or Roof Slope Using a Carpenters Level, http://roofgenius.com/roofpitch.htm, accessed 5/22/2009	

Examiner Signature	/Atiba Fitzpatrick/	Date Considered	05/19/2012

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

1. Applicants unique citation designation number. (optional) 2. Applicant is to place a check mark here if English language Translation is attached.

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BIB DATA SHEET

CONFIRMATION NO. 4950

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
12/470,984	05/22/2009	382	2624	6338.140

APPLICANTS

Dale R. Thornberry, Carmel, IN;
Chris T. Thornberry, Indianapolis, IN;
Mark F. Garringer, Eaton, IN;

NO /A.F./

**** CONTINUING DATA ***************************

NO /A.F./

**** FOREIGN APPLICATIONS ***************************

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **** ** SMALL ENTITY **
06/01/2009

Foreign Priority claimed ☐ Yes ☑ No 35 USC 119(a-d) conditions met ☐ Yes ☐ No Verified and Acknowledged /ATIBA O FITZPATRICK/ Examiner's Signature	☐ Met after Allowance Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		IN	21	24	3

ADDRESS

DUNLAP CODDING, P.C.
PO BOX 16370
OKLAHOMA CITY, OK 73113
UNITED STATES

TITLE

SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY

FILING FEE RECEIVED		
826	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

Electronically Filed On: November 21, 2012

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.	:	12/470,984
Confirmation No.	:	4950
Applicants(s)	:	Thornberry, D.R., Thornberry, C.T., Garringer, M.
Filed	:	05/22/2009
TC/A.U.	:	2624
Examiner	:	Atiba O. Fitzpatrick
Title	:	System and Process for Roof Measurement Using Aerial Imagery
Docket No.	:	6338.140
Customer No.	:	30589

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

RESPONSE TO OFFICE ACTION

Applicants submit the following response to the Office Action mailed on May 22, 2012:

Listing of Claims begins on page 2 of this paper; and,

Remarks begin on page 6 of this paper.

LISTING OF THE CLAIMS

The following listing of claims supersedes and replaces all prior versions in the patent application.

Claims 1-22 (Cancelled)

23. (Currently Amended) A process for determining attributes of a roof structure of a real-world three-dimensional building, comprising the acts of:

Providing at least one computer input field for a user to input first location data generally corresponding to the location of the building;

Providing visual access to an oblique image ~~digital aerial imagery~~ of a region including the roof structure of the building corresponding to said first location data;

On the oblique image ~~said imagery~~ of [a] the region, providing a visual marker that is moveable on said computer monitor around said region, said visual marker initially corresponding to said first location data, wherein said visual marker may be moved to a final location on top of the building to more precisely identify the location of the building roof structure, the final location having location coordinates;

Providing a computer input capable of signaling user-acceptance of the final location of said marker[.]; and,

Providing visual access to one or more images of an aerial imagery database corresponding to location coordinates of the final location.

24. (Cancelled)

25. (Currently Amended) The process of claim 23 and wherein said first location data comprised street address data, and wherein said location coordinates of said final location [is] are translated to latitude and longitude coordinates.

26. (Currently Amended) The process of claim 25 and wherein said image corresponding to the first location data ~~aerial imagery~~ is from a first imagery database from which said final location is selected and is internet-based imagery having a corresponding street address look up field, and wherein the aerial imagery database is a second imagery database, and further comprising the act of:

using said latitude and longitude coordinates to access imagery from [a] the second imagery database.

27. (Previously Presented) The process of claim 26 and further comprising the act of:

generating, in computer memory, outline drawings around outlines corresponding to roof planes based on tracing from said imagery from said second imagery database.

28. (Previously Presented) The process of claim 27 and wherein said providing acts are provided over an internet interface.

29. (Previously Presented) The process of claim 28 and further comprising the act of:

providing a printed report that includes an aerial image of the building roof structure.

30. (Currently Amended) The process of claim 23 and further comprising the act of:

generating, in computer memory, outline drawings around outlines corresponding to roof planes based on tracing from said imagery ~~from said second imagery database~~.

31. (Previously Presented) The process of claim 23 and wherein said providing acts are provided over an internet interface.

32. (Previously Presented) The process of claim 23 and further comprising the act of:

providing a printed report that includes an aerial image of the building roof structure.

33. (Previously Presented) The process of claim 32 and wherein the printed report includes a latitude reference and/or a longitude reference corresponding to the location of the building roof structure.

34. (New) The process of claim 23, wherein the user is a customer.

35. (New) The process of claim 23, wherein the user is a commercial vendor.

36. (New) The process of claim 23, further comprising providing visual access to the one or more images of the aerial imagery database corresponding to the final location data.

REMARKS

Claims 23, 25-36 are pending, with claim 23 being independent. Claims 1-22 and 24 have been cancelled. Claims 23, 25, 26, and 30 have been amended. Claims 34-36 have been added. No new subject matter has been added.

In the Office Action, claims 23 and 25-33 were rejected as discussed in more detail below. In response thereto, claims 23, 25, 26 and 30 have been amended, and claims 34-36 have been added. Support for the amendment to claim 23 is found in Figure 4B and Paragraph [0029] of the present patent application. Support for claims 34 and 35 may be found in at least paragraph [0087]. Support for claim 36 may be found in at least paragraph [0088] and FIGS. 5A and 5B. No new matter has been added.

In view of the following remarks, Applicants respectfully request the Office to allow all pending claims.

Claim Rejection – 35 U.S.C. § 112

Claim 30 was rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter Applicants regard as the invention. In particular, the Office Action states that claim 30 recites the limitation "said second imagery database" in the last line, and there is insufficient antecedent basis for this limitation in the claim language. Claim 30 is herein amended to remove the limitation of "from said second imagery database".

In view thereof, Applicants respectfully request that the Office withdraw the rejection, as claim 30 particularly points out and distinctly claims the subject matter to which Applicants regard as the invention.

Claim Rejection – 35 U.S.C. § 103(a)

Claims 23 and 25-33 were rejected under 35 U.S.C. §103(a) as being unpatentable over Pershing (U.S. Patent Publication No. 2010/0110074) in view of Arutunian, et al. (U.S. Patent Publication No. 2006/0200311). Claim 23 has been amended to clarify the scope of such claim. In particular, claim 23 has been amended to specify the act of providing visual access to an oblique image of a region including the roof structure of the building corresponding to said first location data. Basis for this amendment is found in Figure 4B and Paragraph [0029] of the present patent application. Claim 23 has also been amended to include the act providing visual access to one or more images of an aerial imagery database corresponding to location coordinates of the final location. Basis for this amendment is found, for example, on page 22 of the patent application as originally filed.

Section 2143.03 of the MPEP requires the "consideration" of every claim feature in an obviousness determination. To render independent claim 23 and the claims that depend therefrom unpatentable, however, the Office must do more than merely "consider" each and every feature. Instead, the asserted combination of Pershing and Arutunian must also teach or suggest *each and every claim feature*. *See In re Royka*, 49 F.3d 981, 180 USPQ 580 (CCPA 1974). Here, independent claim 23 recites a visual marker initially corresponding to first location data that is moveable on a computer

monitor around a region, and in virtue of this feature, among others, both independent claim 23, and the claims that depend therefrom are allowable.

The Office submits that Pershing teaches the process for determining attributes of a roof structure of a real-world three-dimensional building as recited in independent claim 23. In particular, the Office submits that Pershing's disclosure of reference marker controls in an image registration function of a roof estimation system teaches the process described within independent claim 23. *See* Office Action, Page 4. Applicants respectfully disagree.

Pershing discloses registration marker controls of an image registration function in FIGS. 4A-4F and paragraphs [0061]-[0063]. The image registration function determines a transformation between each image of a building's roof to a uniform 3D reference grid. *See* Pershing, paragraph [0063]. Generally, the image registration function includes a user interface screen providing multiple images of a building's roof. *See* Pershing, paragraph [0062] and FIGS. 4B-4C. Each image includes four registration marker controls used by an operator to set reference points in the image for purposes of image registration, rather than "providing access to one or more images of an aerial image database corresponding to location coordinates of the final location" as set forth in claim 23, as amended.

Image registration, according to Pershing, is the transformation between each image and a uniform 3D reference grid. *See* Pershing, paragraph [0063]. The uniform 3D reference grid is then used as a coordinate system for a 3D model of the roof. *Id.*

Image registration using registration marker controls, as outlined by Pershing, occurs subsequent to obtaining images of a building's roof for processing. As illustrated

within FIGS. 4A and described within paragraph [0061], the initial user interface screen for image registration is provided after an operator has specified an address of a building and after images of that building have been obtained and loaded into the roof estimation system. *See* Pershing, paragraph [0061] and FIG. 4A. Thus, Pershing has already used the operator's specified address, determined the location of the building's roof, and pulled images of that roof for image registration prior to the display or use of any registration marker controls.

Pershing's registration markers do not "initially" correspond to "said first location data" generally corresponding to the location of the building as set forth in claim 23. In Pershing's system, the roof modeling project has already begun before the registration markers are employed. See Paragraph [0061] which states:

> The user interface screen 400 shows a roof modeling project in an initial state, after the operator has specified an address of a building and after images of the building have been obtained and loaded into the roof estimation system.

Even further, Pershing fails to provide a computer input capable of signaling user-acceptance of the final location of a marker identifying the location of the building roof structure as set forth in claim 23. The Office states that by manually selecting locations for markers and for subsequent processing, the operator is signaling acceptance of location as set out in independent claim 23. Pershing, however, has already obtained images of the building's roof structure and loaded these images into the roof estimation system. Within Pershing's system, a determination has already been made that a building's roof structure is within each image and selected the specific roof for loading, and as such, acceptance was provided before registration markers are even used within

the image. Thus, Pershing fails to provide for a computer input capable of signaling user-acceptance of the final location of a marker as set forth in independent claim 23.

Finally, Pershing fails to provide access to one or more images of an aerial imagery database corresponding to location coordinates of the final location. Each image in Pershing includes four registration markers used by an operator to set reference points in the image for purposes of image registration. *Id.* Image registration, according to Pershing, is the transformation between each image and a uniform 3D reference grid. *See* Pershing, paragraph [0063]. The uniform 3D reference grid is then used as a coordinate system for a 3D model of the roof. *Id.* Once the image is "registered" using the registration markers, an option is given to either register another image or begin the modeling process. *See* Pershing, paragraphs [0077-0078]. Thus, final placement of the registration markers, as described by Pershing, does not provide access to one or more images corresponding to location coordinates of the final location as set forth in claim 23.

Arutunian fails to remedy the deficiencies of Pershing. The Office submits that Arutunian teaches providing at least one computer input field for a user to input first location data corresponding to the location of the building.

Generally, Arutunian provides for an address text box and a zip code text box wherein a user can enter his or her address. *See* Arutunian, paragraph [0053]. As a result, the user is provided a page showing the user's home on a map. *Id.* Arutunian does not provide for a visual marker initially corresponding to said first location data that is moveable on a computer monitor. Further, Arutunian does not provide a computer input capable of signaling user-acceptance of the final location of the marker, as

Arutunian does not provide for a marker initially corresponding to said first location data generally corresponding to the location of the building. Thus, neither Arutunian nor Pershing teach or even suggest a process for determining attributes of a roof structure of a real-world three-dimensional building as recited in independent claim 23.

For at least the above reasons, a *prima facie* case of obviousness has not been established for independent claim 23 and the claims that depend therefrom. Applicants therefore respectfully request removal of the 35 U.S.C. § 103(a) rejection of independent claim 23 and the claims that depend therefrom over Pershing in view of Arutunian.

Supplemental Information Disclosure Statement

Attached for the Examiner's consideration is a variety of references set forth in a Supplemental Information Disclosure Statement. The Examiner's consideration of the references would be greatly appreciated.

CONCLUSION

The foregoing is intended to be a complete response to the Office Action mailed May 22, 2012. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reason for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this response should be construed as

intent to concede any issue with regard to any claim, except as specifically stated in this paper.

Should the Examiner have any comments or questions regarding the foregoing, Applicants' attorney would welcome a telephonic interview with the Examiner. For the reasons stated above, reconsideration and withdrawal of the rejections is respectfully requested.

Respectfully submitted,



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Electronically Transmitted: 11/21/2012 **PATENT**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.	:	**12/470,984**
Applicant(s)	:	**Dale R. Thornberry**
Filed	:	**05/22/2009**
TC/Au	:	**2624**
Examiner	:	**Atiba O. Fitzpatrick**
Title	:	**SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY**
Docket No.	:	**6338.140**
Customer No.	:	**30589**

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

EIGHTH SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

List of Sections Forming Part of This Information Disclosure Statement

The following sections are being submitted for this Information Disclosure Statement:

1. [X] Preliminary Statements

2. [X] Form PTO-1449 (Modified)

3. [X] Copies of Listed Information Items Accompanying this Statement

4. [ ] Concise Explanation of English Language Listed Information Items (Optional)

5. [X] Identification of Person(s) Making this Information Disclosure Statement

Section 1. Preliminary Statements

Applicants submit herewith patents, publications or other information of which they are aware, which they believe may be material to the examination of this application and in respect of which there may be a duty to disclose.

The filing of this information disclosure statement shall not be construed as a representation that a search has been made (37 C.F.R. § 1.97(g)), an admission that the information cited is, or is considered to be, material to patentability or that no other material information exists.

The filing of this information disclosure statement shall not be construed as an admission against interest in any manner. Notice of January 9, 1992, 1135 O.G. 13-25, at 25.

Section 2. Form PTO-1449 (Modified)

[X] A completed Form PTO-1449 (Modified) is attached hereto.

[ ] No Form 1449 (Modified) is attached.

Section 3. Copies of Listed Information Items Accompanying this Statement

[X] As this application is being filed after June 30, 2003, no copies of cited U.S. patents or patent application publications are submitted herewith.

Section 4. Concise Explanation of English Language Listed Information Items (OPTIONAL)

Section 5. Identification of Person(s) Making this INFORMATION DISCLOSURE STATEMENT

The person making this statement is the attorney who signs below on the basis of the information:

[ ] supplied by the inventor(s)

[ ] supplied by an individual associated with the filing and prosecution of this application (37 C.F.R. § 1.56(c)).

[X] in the attorney's file

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ELECTRONICALLY FILED ON: November 21, 2012

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

Substitute for form PTO/SB/08a

EIGHTH SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	12/470,984
Filing Date	05/22/2009
First Named Inventor	Dale R. Thornberry
Art Unit	2624
Examiner Name	Atiba O. Fitzpatrick
Attorney Docket Number	6338.140

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Electronic Patent Application Fee Transmittal

Application Number:	12470984
Filing Date:	22-May-2009
Title of Invention:	SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY
First Named Inventor/Applicant Name:	Dale R. Thornberry
Filer:	Marc Alan Brockhaus/Lori Radford
Attorney Docket Number:	6338.140

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

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Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 3 months with $0 paid	2253	1	645	645

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
		Total in USD ($)		**825**

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EFS ID:	14288477
Application Number:	12470984
International Application Number:	
Confirmation Number:	4950
Title of Invention:	SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY
First Named Inventor/Applicant Name:	Dale R. Thornberry
Customer Number:	30589
Filer:	Marc Alan Brockhaus/Lori Radford
Filer Authorized By:	Marc Alan Brockhaus
Attorney Docket Number:	6338.140
Receipt Date:	21-NOV-2012
Filing Date:	22-MAY-2009
Time Stamp:	14:28:04
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$825
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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	12/470,984
Filing Date	05/22/2009
First Named Inventor	Dale R. Thornberry
Art Unit	2624
Examiner Name	Atiba O. Fitzpatrick
Attorney Docket Number	6338.140

Total Number of Pages in This Submission

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☑ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☑ Extension of Time Request
- ☐ Express Abandonment Request
- ☑ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
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- ☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
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PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)

Docket Number (Optional): 6338.140

Application Number: 12/470,984

Filed: 05/22/2009

For: System and Process for Roof Measurement Using Aerial Imagery

Art Unit: 2624

Examiner: Atiba O. Fitzpatrick

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above-identified application.

The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):

	Fee	Small Entity Fee	
☐ One month (37 CFR 1.17(a)(1))	$150	$75	$
☐ Two months (37 CFR 1.17(a)(2))	$570	$285	$
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☐ Four months (37 CFR 1.17(a)(4))	$2,010	$1,005	$
☐ Five months (37 CFR 1.17(a)(5))	$2,730	$1,365	$

■ Applicant claims small entity status. See 37 CFR 1.27.

☐ A check in the amount of the fee is enclosed.

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☐ The Director has already been authorized to charge fees in this application to a Deposit Account.

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I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest. See 37 CFR 3.71. 37 CFR 3.73(b) statement is enclosed (Form PTO/SB/96).

■ attorney or agent of record. Registration number 40,923.

☐ attorney or agent acting under 37 CFR 1.34. Registration number _____.

Marc Brockhaus
Signature

11/21/2012
Date

Marc A. Brockhaus
Typed or printed name

405-607-8600
Telephone Number

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.

☐ * Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.136(a). 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 1.11 and 1.14. This collection is estimated to take 6 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: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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 12/470,984	Filing Date 05/22/2009	☒ 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

AMENDMENT	11/21/2012	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 13	Minus	** 33	= 0	X $31 =	0	OR	X $ =	
	Independent (37 CFR 1.16(h))	* 1	Minus	***3	= 0	X $125 =	0	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	0	OR	TOTAL ADD'L FEE	

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) 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:
/NICHELE PETERSON/

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

30589 7590 12/11/2012

DUNLAP CODDING, P.C.
PO BOX 16370
OKLAHOMA CITY, OK 73113

EXAMINER
FITZPATRICK, ATIBA O

ART UNIT	PAPER NUMBER
2668	

DATE MAILED: 12/11/2012

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/470,984	05/22/2009	Dale R. Thornberry	6338.140	4950

TITLE OF INVENTION: SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$885	$300	$0	$1185	03/11/2013

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 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.

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)

30589 7590 12/11/2012

DUNLAP CODDING, P.C.
PO BOX 16370
OKLAHOMA CITY, OK 73113

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.
12/470,984	05/22/2009	Dale R. Thornberry	6338.140	4950

TITLE OF INVENTION: SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY

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nonprovisional	YES	$885	$300	$0	$1185	03/11/2013

EXAMINER	ART UNIT	CLASS-SUBCLASS
FITZPATRICK, ATIBA O	2668	382-100000

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 PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/470,984	05/22/2009	Dale R. Thornberry	6338.140	4950

30589 7590 12/11/2012

DUNLAP CODDING, P.C.
PO BOX 16370
OKLAHOMA CITY, OK 73113

EXAMINER	
FITZPATRICK, ATIBA O	

ART UNIT	PAPER NUMBER
2668	

DATE MAILED: 12/11/2012

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 515 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 515 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)	
	12/470,984	THORNBERRY ET AL.	
	Examiner	Art Unit	
	ATIBA O. FITZPATRICK	2668	

-- 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 *11/21/2012*.

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 *23 and 25-36 (renumbered 1-13)*. 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 11/21/2012, 03/04/2011, 01/19/2010
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 _____.

/ATIBA O FITZPATRICK/
Primary Examiner, Art Unit 2668

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance: See Applicant's remarks.

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."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ATIBA O. FITZPATRICK whose telephone number is (571)270-5255. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vu Le can be reached on (571)272-7332. 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.

/ATIBA O FITZPATRICK/
Primary Examiner, Art Unit 2668

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	12/470984.app.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/04 14:02
L2	1	(THORNBERRY-DALE$, THORNBERRY-CHRIS$, GARRINGER-MARK$).in.	US-PGPUB; USPAT; USOCR	OR	ON	2012/12/04 14:02
L3	42	("5319541" | "6859768" | "20100110074" | "6496184" | "20070150366" | "5699444" | "5625827" | "6636803" | "6798925" | "20060282235" | "7305983" | "6446053" | "7133551" | "20100114537" | "20100179787" | "5633995" | "6980690" | "7324666" | "7085400" | "20030014224" | "20020154174" | "20060200311" | "20090132436" | "7003400" | "6396491" | "7239761" | "20050038636" | "7343268" | "20080262789" | "4497551" | "7133570" | "6766282" | "7164883" | "20080221843" | "5995765" | "7046839" | "20050288959" | "6323885" | "6385541" | "6836270" | "7006977" | "20080105045").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/12/04 14:02
L4	13	L3 and (marker mark$3 index indicator tag$4 label$4 pin) near5 (moveable mov$3 chang$3 adjust$4 updat$3 alter$3 vary$3 modif$4 edit$4 calibrat$4 refin$4 tune tuning tuned fine$2tun$3 replac$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/04 14:02
L5	5	L4 and (provid$4 input$4 enter$4 entry) near5 (address$4 position$5 locat$4 placed placement placing situating situated point coordinat$4) and (address$4 position$5 locat$4 placed placement placing situating situated point coordinat$4) near5 (marker mark$3 index indicator tag$4 label$4 pin)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/04 14:02
L6	8	L4 not L5	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/04 14:02
L7	29	L3 not L4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2012/12/04 14:02

			DERWENT; IBM_TDB			
L8	2	roof with (image picture photograph$4 frame video) and (latitud$5 longitud$5) with (image picture photograph$4 frame video) with (plural$3 poly many several numerous various multi dual multiple (more NEAR2 than) two three first second third all any every each additional subsequent another next) near2 (database knowledge$3base)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/04 14:02
L9	4	roof with (image picture photograph$4 frame video) and (latitud$5 longitud$5) with (image picture photograph$4 frame video) with (database knowledge$3base) and (plural$3 poly many several numerous various multi dual multiple (more NEAR2 than) two three first second third all any every each additional subsequent another next) near2 (database knowledge$3base) not L8	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/04 14:02
L10	4	(US-20120120069-$ or US-20100179787-$ or US-20080262789-$).did. or (US-8145578-$).did.	US-PGPUB; USPAT	OR	ON	2012/12/04 14:02
L11	4	L10 and (plural$3 poly many several numerous various multi dual multiple (more NEAR2 than) two three first second third all any every each additional subsequent another next) near2 (database knowledge$3base)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/04 14:02
L12	42	("5319541" | "6859768" | "20100110074" | "6496184" | "20070150366" | "5699444" | "5625827" | "6636803" | "6798925" | "20060282235" | "7305983" | "6446053" | "7133551" | "20100114537" | "20100179787" | "5633995" | "6980690" | "7324666" | "7085400" | "20030014224" | "20020154174" | "20060200311" | "20090132436" | "7003400" | "6396491" | "7239761" | "20050038636" | "7343268" | "20080262789" | "4497551" | "7133570" | "6766282" | "7164883" | "20080221843" | "5995765" | "7046839" | "20050288959" | "6323885" | "6385541" | "6836270" | "7006977" | "20080105045").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/12/04 14:02
L13	12	L12 and (plural$3 poly many several numerous various multi dual multiple (more NEAR2 than) two three first second third all any every each additional subsequent another next) near2 (database knowledge$3base)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/04 14:02
L14	0	roof with (image picture photograph$4 frame video) and report$4 with (latitud$5 longitud$5) with (image picture photograph$4 frame video)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/04 14:02
L15	8	roof with (image picture photograph$4	US-PGPUB;	OR	ON	2012/12/04

		frame video) and report$4 with (latitud$5 longitud$5)	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			14:02
L16	8	(US-20100296693-$ or US-20070107620-$ or US-20050216147-$ or US-20030095789-$).did. or (US-7391956-$ or US-7246007-$ or US-6625383-$ or US-6571052-$).did.	US-PGPUB; USPAT	OR	ON	2012/12/04 14:02
L17	8	(US-20100296693-$ or US-20070107620-$ or US-20050216147-$ or US-20030095789-$).did. or (US-7391956-$ or US-7246007-$ or US-6625383-$ or US-6571052-$).did.	US-PGPUB; USPAT	OR	ON	2012/12/04 14:02
L18	8	L17 and report$4 with (latitud$5 longitud$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/04 14:02
L19	1	L12 and report$4 with (latitud$5 longitud$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/04 14:02
L20	20	L12 and (latitud$5 longitud$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/04 14:02
L21	1	"20100110074".pn. and report$4 with model$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/04 14:02
L22	34	L12 and (database knowledge$3base)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/04 14:02
L23	2	"20100110074".pn. and (outlin$4 contour$4 border$4 trac$4 arm$3 boundar$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/04 14:02
L24	11	L12 and (field) with (address$4 position$5 locat$4 placed placement placing situating situated point coordinat$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2012/12/04 14:02

			DERWENT; IBM_TDB			
L25	11	L12 and (accept$4 confirm$4 approv$4 affirm$4 authoriz$5) with (address$4 position$5 locat$4 placed placement placing situating situated point coordinat$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/04 14:02
L26	3	L24 and L25	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/04 14:02
L27	42	("5319541" | "6859768" | "20100110074" | "6496184" | "20070150366" | "5699444" | "5625827" | "6636803" | "6798925" | "20060282235" | "7305983" | "6446053" | "7133551" | "20100114537" | "20100179787" | "5633995" | "6980690" | "7324666" | "7085400" | "20030014224" | "20020154174" | "20060200311" | "20090132436" | "7003400" | "6396491" | "7239761" | "20050038636" | "7343268" | "20080262789" | "4497551" | "7133570" | "6766282" | "7164883" | "20080221843" | "5995765" | "7046839" | "20050288959" | "6323885" | "6385541" | "6836270" | "7006977" | "20080105045").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/12/04 14:02
L28	11	L27 and (field) with (address$4 position$5 locat$4 placed placement placing situating situated point coordinat$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/04 14:02
L29	11	L27 and (accept$4 confirm$4 approv$4 affirm$4 authoriz$5) with (address$4 position$5 locat$4 placed placement placing situating situated point coordinat$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/04 14:02
L30	8	L28 not L29	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/04 14:02
L31	3	(US-20060200311-$ or US-20020154174-$).did. or (US-6636803-$).did.	US-PGPUB; USPAT	OR	ON	2012/12/04 14:02
L32	0	L31 and roof	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/04 14:02

L33	29	L27 and ("382"/$, "345"/$, "703"/$, "715"/$, "340"/$).ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/12/04 14:02
L34	159	("2273876" | "20020041328" | "20020041717" | "20020114536" | "20030043824" | "20030088362" | "20030214585" | "20040105090" | "20040167709" | "20050073241" | "20050088251" | "20050169521" | "20060028550" | "20060092043" | "20060238383" | "20060250515" | "20070024612" | "20070046448" | "20070237420" | "20080120031" | "20080123994" | "20090177458" | "20090208095" | "20090304227" | "20100296693" | "20110033110" | "3153784" | "3594556" | "3614410" | "3621326" | "3661061" | "3716669" | "3725563" | "3864513" | "3866602" | "3877799" | "4015080" | "4044879" | "4184711" | "4240108" | "4281354" | "4344683" | "4360876" | "4382678" | "4387056" | "4396942" | "4463380" | "4489322" | "4490742" | "4491399" | "4495500" | "4527055" | "4543603" | "4586138" | "4635136" | "4653136" | "4653316" | "4673988" | "4686474" | "4688092" | "4689748" | "4707698" | "4758850" | "4805033" | "4807024" | "4814711" | "4814896" | "4843463" | "4853227" | "4899296" | "4906198" | "4956872" | "5034812" | "5086314" | "5121222" | "5138444" | "5155597" | "5164825" | "5166789" | "5191174" | "5200793" | "5210586" | "5231435" | "5247356" | "5251037" | "5265173" | "5267042" | "5270756" | "5296884" | "5335072" | "5342999" | "5345086" | "5353055" | "5369443" | "5402170" | "5414462" | "5467271" | "5481479" | "5486948" | "5506644" | "5508736" | "5555018" | "5604534" | "5617224" | "5633946" | "5668593" | "5677515" | "5798786" | "5835133" | "5841574" | "5844602" | "5852753" | "5894323" | "5899945" | "5963664" | "6037945" | "6088055" | "6094215" | "6097854" | "6108032" | "6130705" | "6157747" | "6167300" | "6222583" | "6236886" | "6256057" | "6373522" | "6421610" | "6434280" | "6597818" | "6639596" | "6711475" | "6731329" | "6747686" | "6810383" | "6816819" | "6826539" | "6829584" | "6834128" | "6876763" | "7009638" | "7018050" | "7046401" | "7061650" | "7065260" | "7123382" | "7127348" | "7133551" | "7142984" | "7233691" | "7262790" | "7348895" | "7509241" | "7728833" | "7832267" | "7844499" | "8078396").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/12/04 14:08

S1	1	12/470984.app.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/16 20:46
S3	1	(THORNBERRY-DALE$, THORNBERRY-CHRIS$, GARRINGER-MARK$).in.	US-PGPUB; USPAT; USOCR	OR	ON	2012/05/16 21:45
S4	42	("5319541" | "6859768" | "20100110074" | "6496184" | "20070150366" | "5699444" | "5625827" | "6636803" | "6798925" | "20060282235" | "7305983" | "6446053" | "7133551" | "20100114537" | "20100179787" | "5633995" | "6980690" | "7324666" | "7085400" | "20030014224" | "20020154174" | "20060200311" | "20090132436" | "7003400" | "6396491" | "7239761" | "20050038636" | "7343268" | "20080262789" | "4497551" | "7133570" | "6766282" | "7164883" | "20080221843" | "5995765" | "7046839" | "20050288959" | "6323885" | "6385541" | "6836270" | "7006977" | "20080105045").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/05/17 09:20
S5	13	S4 and (marker mark$3 index indicator tag$4 label$4 pin) near5 (moveable mov$3 chang$3 adjust$4 updat$3 alter$3 vary$3 modif$4 edit$4 calibrat$4 refin$4 tune tuning tuned fine$2tun$3 replac$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/17 10:16
S6	5	S5 and (provid$4 input$4 enter$4 entry) near5 (address$4 position$5 locat$4 placed placement placing situating situated point coordinat$4) and (address$4 position$5 locat$4 placed placement placing situating situated point coordinat$4) near5 (marker mark$3 index indicator tag$4 label$4 pin)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/17 10:18
S7	8	S5 not S6	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/17 10:58
S8	29	S4 not S5	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/17 11:00
S18	2	roof with (image picture photograph$4 frame video) and (latitud$5 longitud$5) with (image picture photograph$4 frame video) with (plural$3 poly many several numerous various multi dual multiple (more NEAR2 than) two three first second third all any every each additional subsequent another next) near2 (database knowledge$3base)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 14:58

S19	4	roof with (image picture photograph$4 frame video) and (latitud$5 longitud$5) with (image picture photograph$4 frame video) with (database knowledge$3base) and (plural$3 poly many several numerous various multi dual multiple (more NEAR2 than) two three first second third all any every each additional subsequent another next) near2 (database knowledge$3base) not S18	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 15:00
S20	4	(US-20120120069-$ or US-20100179787-$ or US-20080262789-$).did. or (US-8145578-$).did.	US-PGPUB; USPAT	OR	ON	2012/05/19 15:02
S21	4	S20 and (plural$3 poly many several numerous various multi dual multiple (more NEAR2 than) two three first second third all any every each additional subsequent another next) near2 (database knowledge$3base)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 15:02
S22	42	("5319541" | "6859768" | "20100110074" | "6496184" | "20070150366" | "5699444" | "5625827" | "6636803" | "6798925" | "20060282235" | "7305983" | "6446053" | "7133551" | "20100114537" | "20100179787" | "5633995" | "6980690" | "7324666" | "7085400" | "20030014224" | "20020154174" | "20060200311" | "20090132436" | "7003400" | "6396491" | "7239761" | "20050038636" | "7343268" | "20080262789" | "4497551" | "7133570" | "6766282" | "7164883" | "20080221843" | "5995765" | "7046839" | "20050288959" | "6323885" | "6385541" | "6836270" | "7006977" | "20080105045").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/05/19 15:04
S23	12	S22 and (plural$3 poly many several numerous various multi dual multiple (more NEAR2 than) two three first second third all any every each additional subsequent another next) near2 (database knowledge$3base)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 15:04
S24	0	roof with (image picture photograph$4 frame video) and report$4 with (latitud$5 longitud$5) with (image picture photograph$4 frame video)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 15:20
S25	8	roof with (image picture photograph$4 frame video) and report$4 with (latitud$5 longitud$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 15:21
S26	8	(US-20100296693-$ or US-20070107620-$ or US-20050216147-$ or US-20030095789-$).did. or (US-7391956-$ or US-7246007-$ or US-6625383-$ or US-6571052-$).did.	US-PGPUB; USPAT	OR	ON	2012/05/19 15:21
S27	8	(US-20100296693-$ or US-20070107620-$	US-PGPUB;	OR	ON	2012/05/19

		or US-20050216147-$ or US-20030095789-$).did. or (US-7391956-$ or US-7246007-$ or US-6625383-$ or US-6571052-$).did.	USPAT			15:21
S28	8	S27 and report$4 with (latitud$5 longitud$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 15:22
S29	1	S22 and report$4 with (latitud$5 longitud$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 15:29
S30	20	S22 and (latitud$5 longitud$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 15:31
S31	1	"20100110074".pn. and report$4 with model$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 15:38
S32	34	S22 and (database knowledge$3base)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 15:48
S33	2	"20100110074".pn. and (outlin$4 contour$4 border$4 trac$4 arm$3 boundar$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 16:19
S34	11	S22 and (field) with (address$4 position$5 locat$4 placed placement placing situating situated point coordinat$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 16:50
S35	11	S22 and (accept$4 confirm$4 approv$4 affirm$4 authoriz$5) with (address$4 position$5 locat$4 placed placement placing situating situated point coordinat$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 16:51
S36	3	S34 and S35	US-PGPUB; USPAT;	OR	ON	2012/05/19 16:52

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S37	42	("5319541" | "6859768" | "20100110074" | "6496184" | "20070150366" | "5699444" | "5625827" | "6636803" | "6798925" | "20060282235" | "7305983" | "6446053" | "7133551" | "20100114537" | "20100179787" | "5633995" | "6980690" | "7324666" | "7085400" | "20030014224" | "20020154174" | "20060200311" | "20090132436" | "7003400" | "6396491" | "7239761" | "20050038636" | "7343268" | "20080262789" | "4497551" | "7133570" | "6766282" | "7164883" | "20080221843" | "5995765" | "7046839" | "20050288959" | "6323885" | "6385541" | "6836270" | "7006977" | "20080105045").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/05/19 17:14
S38	11	S37 and (field) with (address$4 position$5 locat$4 placed placement placing situating situated point coordinat$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 17:14
S39	11	S37 and (accept$4 confirm$4 approv$4 affirm$4 authoriz$5) with (address$4 position$5 locat$4 placed placement placing situating situated point coordinat$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 17:14
S40	8	S38 not S39	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 17:14
S41	3	(US-20060200311-$ or US-20020154174-$).did. or (US-6636803-$).did.	US-PGPUB; USPAT	OR	ON	2012/05/19 17:24
S42	0	S41 and roof	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 17:24
S43	29	S37 and ("382"/$, "345"/$, "703"/$, "715"/$, "340"/$).ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/05/19 18:41

12/ 4/ 2012 2:25:16 PM
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PTO/SB/08b (06-09)
Approved for use through 07/31/2009. OMB 0651-0031
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Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet | | of | |

Complete if Known	
Application Number	12/470,984
Filing Date	May 22, 2009
First Named Inventor	Thornberry, Dale
Art Unit	2624
Examiner Name	Unassigned Atiba Fitzpatrick
Attorney Docket Number	020283-000011

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]
	1	OLOF HENRICSSON, The Role of Color Attributes and Similarity Grouping in 3-D Building Reconstruction, Institute of Photogrammetry and Geodesy, Zurich, Switzerland Nov 1998	
	2	CC-Modeler: a topology generator for 3-D city models, abstract, May 15, 1998	
	3	ARMIN GRUEN and HINHUA WANG; CC-Modeler: A Topology Generator for 3-D City Models, Inst. of Geodesy and Photogrammetry, Zurich, Switzerland Oct 1998	
	4	MICROSOFT'S MSN VIRTUAL EARTH: The Map is the Search Platform; February 6, 2009	
	5	EAGLE VIEW TECHNOLOGIES; Eagle View Measurements Premium Report; October 22, 2008	

Examiner Signature	/Atiba Fitzpatrick/	Date Considered	12/07/2012

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

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. 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 2 hours 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, 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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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /A.F./

PTO/SB/08a (07-09)
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U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
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Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 3

Complete if Known	
Application Number	12/470,984
Filing Date	05-22-09
First Named Inventor	Dale R. Thornberry
Art Unit	2668
Examiner Name	Atiba Fitzpatrick
Attorney Docket Number	020283-000011

U.S. PATENT DOCUMENTS

Examiner initial *	Cite No. 1	Document Number: Number	Kind Code2 (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
	1	US-2008/0105045		05-08-2008	Woro	
	2	US-2008/0221843		09-11-2008	Shenkar et al.	
	3	US-2010/0114537		05-06-2010	Pershing	
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Examiner Signature	/Atiba Fitzpatrick/	Date Considered	12/07/2012

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3. Enter Office that isssued the document, by the two-letter code (WIPO Standard ST.3.) 4. For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.f 16 if possible. 6. Applicant is to place a check mark here if English language Translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 2 of 3

Complete if Known	
Application Number	12/470,984
Filing Date	05-22-09
First Named Inventor	Dale R. Thornberry
Group Art Unit	2668
Examiner Name	Atiba Fitzpatrick
Attorney Docket Number	020283-000011

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Examiner initial *	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
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Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12470984	THORNBERRY ET AL.
	Examiner	Art Unit
	ATIBA O FITZPATRICK	2624

SEARCHED

Class	Subclass	Date	Examiner
345	423-426	12/4/2012	/A.F./
703	1-9	12/4/2012	/A.F./
382	100-107	12/4/2012	/A.F./
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340	990-995.27	12/4/2012	/A.F./

SEARCH NOTES

Search Notes	Date	Examiner
EAST	12/4/2012	/A.F./
EAST	12/4/2012	/A.F./
EAST	12/4/2012	/A.F./
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EAST	12/4/2012	/A.F./

INTERFERENCE SEARCH

Class	Subclass	Date	Examiner
	PGPub text search; see interference search printout	12/4/2012	/A.F./

	/ATIBA O FITZPATRICK/ Primary Examiner.Art Unit 2624

Issue Classification

Application/Control No.	Applicant(s)/Patent Under Reexamination
12470984	THORNBERRY ET AL.
Examiner	**Art Unit**
ATIBA O FITZPATRICK	2668

ORIGINAL		INTERNATIONAL CLASSIFICATION									
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED				
382	100	G	0	6	K	9 / 00 (2006.01.01)	G	0	6	K	9 / 00 (2006.01.01)

CROSS REFERENCE(S)					
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				

☐ 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		17	10	33										
	2		18	11	34										
	3		19	12	35										
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	14	7	30												
	15	8	31												
	16	9	32												

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	13	
/ATIBA O FITZPATRICK/ Primary Examiner.Art Unit 2668	12/04/2012	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3

ELECTRONICALLY FILED ON: November 21, 2012

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

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EIGHTH SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	12/470,984
Filing Date	05/22/2009
First Named Inventor	Dale R. Thornberry
Art Unit	2624
Examiner Name	Atiba O. Fitzpatrick
Attorney Docket Number	6338.140

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Examiner Initial*	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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EXAMINER SIGNATURE			
Examiner Signature	/Atiba Fitzpatrick/	Date Considered	12/04/2012

*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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[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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Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12470984	THORNBERRY ET AL.
	Examiner	**Art Unit**
	ATIBA O FITZPATRICK	2624

✓	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	03/13/2012	05/19/2012	12/04/2012						
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2	25	÷	✓	=						
3	26	÷	✓	=						
4	27	÷	✓	=						
5	28	÷	✓	=						
6	29	÷	✓	=						
7	30	÷	✓	=						
8	31	÷	✓	=						
9	32	÷	✓	=						
10	33	÷	✓	=						
11	34			=						
12	35			=						
13	36			=						

EAST Search History

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L6	8	(image marker roof).clm.	US-PGPUB; USPAT; UPAD	AND	ON	2012/12/04 18:05
L7	983	(image roof).clm.	US-PGPUB; USPAT; UPAD	AND	ON	2012/12/04 18:06

12/ 4/ 2012 6:11:03 PM
C:\ Users\ afitzpatrick\ Documents\ EAST\ Workspaces\ 12470984.wsp

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Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
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30589 7590 12/11/2012
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Marc Brockhaus (Depositor's name)
Marc A. Brockhaus (Signature)
01/25/2013 (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/470,984	05/22/2009	Dale R. Thornberry	6338.140	4950

TITLE OF INVENTION: SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$885	$300	$0	$1185	03/11/2013

EXAMINER	ART UNIT	CLASS-SUBCLASS
FITZPATRICK, ATIBA O	2668	382-100000

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 DUNLAP CODDING, P.C.
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: Pictometry International Corp.
(B) RESIDENCE: (CITY and STATE OR COUNTRY): Rochester, New York

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)
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☐ 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 Marc Brockhaus Date 01/25/2013
Typed or printed name Marc A. Brockhaus Registration No. 40,923

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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Electronically Filed On: January 25, 2013

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.	:	12/470,984
Confirmation No.	:	4950
Applicants(s)	:	Thornberry, D.R., Thornberry, C.T., Garringer, M.
Filed	:	05/22/2009
TC/A.U.	:	2624
Examiner	:	Atiba O. Fitzpatrick
Title	:	System and Process for Roof Measurement Using Aerial Imagery
Docket No.	:	6338.140
Customer No.	:	30589

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

AMENDMENT UNDER 37 C.F.R. § 1.312

Sir:

Pursuant to the provisions of 37 C.F.R. § 1.312, Applicants hereby request entry of the following amendment in the above-referenced application, prior to payment of the Issue Fee.

Amendment to the Claims begins on page **2** of this paper.

Remarks begin on page **8** of this paper.

LISTING OF THE CLAIMS

The following listing of claims supersedes and replaces all prior versions in the patent application.

Claims 1-22 (Cancelled)

23. (Previously Presented) A process for determining attributes of a roof structure of a real-world three-dimensional building, comprising the acts of:

Providing at least one computer input field for a user to input first location data generally corresponding to the location of the building;

Providing visual access to an oblique image of a region including the roof structure of the building corresponding to said first location data;

On the oblique image of the region, providing a visual marker that is moveable on said computer monitor around said region, said visual marker initially corresponding to said first location data, wherein said visual marker may be moved to a final location on top of the building to more precisely identify the location of the building roof structure, the final location having location coordinates;

Providing a computer input capable of signaling user-acceptance of the final location of said marker; and,

Providing visual access to one or more images of an aerial imagery database corresponding to location coordinates of the final location.

24. (Cancelled)

25. (Previously Presented) The process of claim 23 and wherein said first location data comprised street address data, and wherein said location coordinates of said final location are translated to latitude and longitude coordinates.

26. (Previously Presented) The process of claim 25 and wherein said image corresponding to the first location data is from a first imagery database from which said final location is selected and is internet-based imagery having a corresponding street address look up field, and wherein the aerial imagery database is a second imagery database, and further comprising the act of:

using said latitude and longitude coordinates to access imagery from the second imagery database.

27. (Previously Presented) The process of claim 26 and further comprising the act of:

generating, in computer memory, outline drawings around outlines corresponding to roof planes based on tracing from said imagery from said second imagery database.

28. (Previously Presented) The process of claim 27 and wherein said providing acts are provided over an internet interface.

29. (Previously Presented) The process of claim 28 and further comprising the act of:

providing a printed report that includes an aerial image of the building roof structure.

30. (Previously Presented) The process of claim 23 and further comprising the act of:

generating, in computer memory, outline drawings around outlines corresponding to roof planes based on tracing from said imagery.

31. (Previously Presented) The process of claim 23 and wherein said providing acts are provided over an internet interface.

32. (Previously Presented) The process of claim 23 and further comprising the act of:

providing a printed report that includes an aerial image of the building roof structure.

33. (Previously Presented) The process of claim 32 and wherein the printed report includes a latitude reference and/or a longitude reference corresponding to the location of the building roof structure.

34. (Previously Presented) The process of claim 23, wherein the user is a customer.

35. (Previously Presented) The process of claim 23, wherein the user is a commercial vendor.

36. (Cancelled)

37. (New) A non-transient computer memory storing computer logic, that when executed by computer hardware causes the computer hardware to determine attributes of a roof structure of a real-world three-dimensional building by:

Providing at least one computer input field for a user to input first location data generally corresponding to the location of the building;

Providing visual access to an oblique image of a region including the roof structure of the building corresponding to said first location data;

On the oblique image of the region, providing a visual marker that is moveable on said computer monitor around said region, said visual marker initially corresponding to said first location data, wherein said visual marker may be moved to a final location on top of the building to more precisely identify the location of the building roof structure, the final location having location coordinates;

Providing a computer input capable of signaling user-acceptance of the final location of said marker; and,

Providing visual access to one or more images of an aerial imagery database corresponding to location coordinates of the final location.

38. (New) The non-transient computer memory of claim 37, wherein said first location data comprised street address data, and wherein said computer logic when executed by computer hardware causes the computer hardware to translate said location coordinates of said final location to latitude and longitude coordinates.

39. (New) The non-transient computer memory of claim 38 wherein said image corresponding to the first location data is from a first imagery database from which said final location is selected and is internet-based imagery having a corresponding street

address look up field, and wherein the aerial imagery database is a second imagery database, and wherein said computer logic when executed by computer hardware causes the computer hardware to:

use said latitude and longitude coordinates to access imagery from the second imagery database.

40. (New) The non-transient computer memory of claim 39, wherein the computer logic, when executed by computer hardware causes the computer hardware to:

generate, in computer memory, outline drawings around outlines corresponding to roof planes based on tracing from said imagery from said second imagery database.

41. (New) The non-transient computer memory of claim 40 and wherein said providing acts are provided over an internet interface.

42. (New) The non-transient computer memory of claim 41, wherein the computer logic, when executed by the computer hardware causes the computer hardware to:

provide a printed report that includes an aerial image of the building roof structure.

43. (New) The non-transient computer memory of claim 37, wherein the computer logic, when executed by computer hardware causes the computer hardware to:

generate, in computer memory, outline drawings around outlines corresponding to roof planes based on tracing from said imagery.

44. (New) The non-transient computer memory of claim 37 and wherein said providing acts are provided over an internet interface.

45. (New) The non-transient computer memory of claim 37, wherein the computer logic, when executed by the computer hardware causes the computer hardware to:

provide a printed report that includes an aerial image of the building roof structure.

46. (New) The non-transient computer memory of claim 45, wherein the printed report includes a latitude reference and/or a longitude reference corresponding to the location of the building roof structure.

REMARKS

The Undersigned would like to thank Examiner Fitzpatrick for the telephonic interview that was conducted on January 16, 2013. In particular, the Undersigned informed Examiner Fitzpatrick that the Applicant would like to add new claims 37-46 into the patent application. New claims 37-46 have similar language as allowed claims 23 and 25-35 with the exception that new claims 37-46 are written in an apparatus format. In particular, the preamble of new claims 37-46 is directed to non-transient computer memory storing computer logic, that when executed by computer hardware causes the computer hardware to determine attributes of a roof structure of a real-world three-dimensional building by: [followed by a list of acts set forth in allowed claims 223 and 25-33]. Basis for the preamble of new claims 37-46 can be found on page 6 of the original patent application under the definition of the term "computer processing means"[1], page 20, line 11 – page 23, line 4, as well as in Figures 4A-4D.

The language of newly added claims 37-46 correspond to the allowed claims 23, and 25-35 as follows:

Claim 23 – Independent Process Claim	Claim 37 – Independent Apparatus Claim
Claim 25 – Dependent Claim	Claim 38– Dependent Claim
Claim 26– Dependent Claim	Claim 39– Dependent Claim
Claim 27– Dependent Claim	Claim 40– Dependent Claim
Claim 28– Dependent Claim	Claim 41– Dependent Claim

[1] The term "computer processing means" means computer hardware and software, including computer memory, microprocessors, computer code and computer logic to provide digital computing.

Claim 29– Dependent Claim	Claim 42– Dependent Claim
Claim 30– Dependent Claim	Claim 43– Dependent Claim
Claim 31– Dependent Claim	Claim 44– Dependent Claim
Claim 32– Dependent Claim	Claim 45– Dependent Claim
Claim 33– Dependent Claim	Claim 46– Dependent Claim

It should also be noted that certain verb tenses in the dependent claims 38-46 have been changed to be consistent with the remainder of the claim. For example, the term "using" in claim 26 has been changed to "use" in claim 39.

In addition, allowed claim 36 has been cancelled since it was duplicative of a certain clause within independent claim 23.

During the Interview, the Undersigned indicated that the new apparatus claims were being added to avoid the expense and delay of filing a continuation patent application on these claims. Further, the Undersigned asserted that the new apparatus claims would not require a new search or otherwise raise any new issues since the new apparatus claims use the same language as the allowed claims, except as discussed above. The Examiner indicated that he believed the proposed new claims were proper, within the scope of allowance of claims 23 and 25-33 and would recommend entry of such claims into the patent application.

If the Examiner notices any issues which would prevent the Examiner from recommending new claims 37-46 to be entered, the Undersigned would appreciate a telephone call to quickly resolve these issues by way of an Examiner's amendment.

CONCLUSION

Should the Examiner have any comments or questions regarding the foregoing, Applicants' attorney would welcome a telephonic interview with the Examiner.

Respectfully submitted,



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Facsimile: 405/607-8686
Attorney for Applicants

Electronic Patent Application Fee Transmittal

Application Number:	12470984
Filing Date:	22-May-2009
Title of Invention:	SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY
First Named Inventor/Applicant Name:	Dale R. Thornberry
Filer:	Marc Alan Brockhaus/Lori Radford
Attorney Docket Number:	6338.140

Filed as Small 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:				
Utility Appl issue fee	2501	1	885	885
Publ. Fee- early, voluntary, or normal	1504	1	300	300

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**1185**

Electronic Acknowledgement Receipt

EFS ID:	14794519
Application Number:	12470984
International Application Number:	
Confirmation Number:	4950
Title of Invention:	SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY
First Named Inventor/Applicant Name:	Dale R. Thornberry
Customer Number:	30589
Filer:	Marc Alan Brockhaus/Lori Radford
Filer Authorized By:	Marc Alan Brockhaus
Attorney Docket Number:	6338.140
Receipt Date:	25-JAN-2013
Filing Date:	22-MAY-2009
Time Stamp:	15:02:20
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$1185
RAM confirmation Number	1746
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)

1	Transmittal Letter	6338140_Transmittal01252013.pdf	67504 6acc51ed0b7cbbf757aec1268b0f6e697dd44021	no	1
Warnings:					
Information:					
2	Issue Fee Payment (PTO-85B)	6338140_PTOL85.pdf	100404 876d3958f908ad44e12b391a5fcf6617795f5f80	no	1
Warnings:					
Information:					
3		6338140_312Amendment.pdf	288951 73973aee6c5e5335e73b9b265d8468a3d3816286	yes	10

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment after Notice of Allowance (Rule 312)	1	1
	Claims	2	7
	Applicant Arguments/Remarks Made in an Amendment	8	10

Warnings:					
Information:					
4	Fee Worksheet (SB06)	fee-info.pdf	31918 900057b26e8a0d38bf1de65b02f38421d8ac485d	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	488777		

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.

Doc Code: TRAN.LET

Document Description: Transmittal Letter

PTO/SB/21 (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number	12/470,984
Filing Date	05/22/2009
First Named Inventor	Dale R. Thornberry
Art Unit	2624
Examiner Name	Atiba O. Fitzpatrick
Attorney Docket Number	6338.140

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☑ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
  - ☐ Landscape Table on CD
- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☑ Other Enclosure(s) (please Identify below):
  See Remarks

Remarks

ELECTRONICALLY TRANSMITTED:
1. SB21 Transmittal Form (1 pg);
2. PTOL85 Part B (1 pg); and
3. Amendment (10 pgs).

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	DUNLAP CODDING, P.C.		
Signature	Marc Brockhaus		
Printed name	Marc A. Brockhaus		
Date	01/25/2013	Reg. No.	40,923

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature	Marc Brockhaus		
Typed or printed name	Marc A. Brockhaus	Date	01/25/2013

This collection of information is required by 37 CFR 1.5. 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 1.11 and1.14. This collection is estimated to 2 hours 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.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/470,984	05/22/2009	Dale R. Thornberry	6338.140	4950

30589 7590 02/04/2013

DUNLAP CODDING, P.C.
PO BOX 16370
OKLAHOMA CITY, OK 73113

EXAMINER	
FITZPATRICK, ATIBA O	
ART UNIT	**PAPER NUMBER**
2668	
MAIL DATE	**DELIVERY MODE**
02/04/2013	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.

Applicant-Initiated Interview Summary	Application No.	Applicant(s)	
	12/470,984	THORNBERRY ET AL.	
	Examiner	Art Unit	
	ATIBA O. FITZPATRICK	2668	

All participants (applicant, applicant's representative, PTO personnel):

(1) *ATIBA O. FITZPATRICK*. (3)_____.

(2) *Marc. A. Brockhaus* . (4)_____.

Date of Interview: *16 January 2013*.

Type: ☒ Telephonic ☐ Video Conference
☐ Personal [copy given to: ☐ applicant ☐ applicant's representative]

Exhibit shown or demonstration conducted: ☐ Yes ☐ No.
If Yes, brief description: _____.

Issues Discussed ☐101 ☐112 ☐102 ☐103 ☒Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: *37-46*.

Identification of prior art discussed: *NA*.

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

Applicant proposed adding new claims that were analogous to process claims that were already allowed. The new claims that Applicant proposed would have substantially the same body, but a different preamble as to cause the new claims to be apparatus claims. Examiner indicated that if no issues were found with the new claims that they could be entered .

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

☐ Attachment

/ATIBA O FITZPATRICK/ Primary Examiner, Art Unit 2668	

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record
A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews
Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.
All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:
- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:
1) A brief description of the nature of any exhibit shown or any demonstration conducted,
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
   (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Response to Rule 312 Communication	Application No.	Applicant(s)
	12/470,984	THORNBERRY ET AL.
	Examiner	Art Unit
	ATIBA O. FITZPATRICK	2668

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

1. ☒ The amendment filed on *25 January 2013* under 37 CFR 1.312 has been considered, and has been:

a) ☒ entered.

b) ☐ entered as directed to matters of form not affecting the scope of the invention.

c) ☐ disapproved because the amendment was filed after the payment of the issue fee.
Any amendment filed after the date the issue fee is paid must be accompanied by a petition under 37 CFR 1.313(c)(1) and the required fee to withdraw the application from issue.

d) ☐ disapproved. See explanation below.

e) ☐ entered in part. See explanation below.

Interview summary attached

/ATIBA O FITZPATRICK/
Primary Examiner, Art Unit 2668

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/470,984	05/22/2009	Dale R. Thornberry	6338.140	4950

30589 7590 02/20/2013

DUNLAP CODDING, P.C.
PO BOX 16370
OKLAHOMA CITY, OK 73113

EXAMINER	
FITZPATRICK, ATIBA O	
ART UNIT	PAPER NUMBER
2668	
MAIL DATE	DELIVERY MODE
02/20/2013	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.

Response to Rule 312 Communication	Application No.	Applicant(s)
	12/470,984	THORNBERRY ET AL.
	Examiner	Art Unit
	ATIBA O. FITZPATRICK	2668

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

1. ☒ The amendment filed on *25 January 2013* under 37 CFR 1.312 has been considered, and has been:

   a) ☐ entered.

   b) ☐ entered as directed to matters of form not affecting the scope of the invention.

   c) ☐ disapproved because the amendment was filed after the payment of the issue fee.
   Any amendment filed after the date the issue fee is paid must be accompanied by a petition under 37 CFR 1.313(c)(1) and the required fee to withdraw the application from issue.

   d) ☒ disapproved. See explanation below.

   e) ☐ entered in part. See explanation below.

Amendment after NoA is not the appropriate mechanism to alter the claim set by adding claims. The amendments are not deemed to require only a cursory review by the examiner. All added claims require a concerted review of the specification of the instant application relative to 35 USC 101 and 112. Instead, an RCE should be filed.

/ATIBA O FITZPATRICK/
Primary Examiner, Art Unit 2668

UNITED STATES PATENT AND TRADEMARK OFFICE

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United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/470,984	03/19/2013	8401222	6338.140	4950

30589 7590 02/27/2013

DUNLAP CODDING, P.C.
PO BOX 16370
OKLAHOMA CITY, OK 73113

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 805 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):

Dale R. Thornberry, Carmel, IN;
Chris T. Thornberry, Indianapolis, IN;
Mark F. Garringer, Eaton, IN;

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.

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY.DOCKET NO./TITLE	REQUEST ID
12/470,984	05/22/2009	Dale R. Thornberry	6338.140	66101

Acknowledgement of Loss of Entitlement to Entity Status Discount

The entity status change request below filed through Private PAIR on 06/19/2018 has been accepted.

CERTIFICATIONS:

Change of Entity Status:

X Applicant changing to regular undiscounted fee status.

NOTE: Checking this box will be taken to be notification of loss of entitlement to small or micro entity status, as applicable.

This portion must be completed by the signatory or signatories making the entity status change in accordance with 37 CFR 1.4(d)(4).

Signature:	/marcabrockhaus/
Name:	Marc A. Brockhaus
Registration Number:	40923

UNITED STATES
PATENT AND TRADEMARK OFFICE

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

CORRESPONDENCE ADDRESS CHANGE

APPLICATION #	FILING OR 371(C) DATE	REQUEST ID
12/470,984	05/22/2009	37738

The following fields have been changed to Customer Number 189081 on 08/10/2022 via Patent Center in view of the certification copied below that authorized the change.

- Correspondence Address

The address for Customer Number 189081 is:

189081 - EagleView
PO BOX 16370
OKLAHOMA CITY , OK 73113

I certify, in accordance with 37 CFR 1.4(d)(4), that I am :

An attorney or Agent of Record registered to practice before the Patent and Trademark Office who has been given power of attorney in this application

Signature	Name	Registration #
/Ann Robl/	ANN ROBL	71541

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P.O. Box 1450
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FEE ADDRESS CHANGE

APPLICATION #	FILING OR 371(C) DATE	REQUEST ID
12/470,984	05/22/2009	37738

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OKLAHOMA CITY, OK 73113

I certify, in accordance with 37 CFR 1.4(d)(4), that I am :

An attorney or Agent of Record registered to practice before the Patent and Trademark Office who has been given power of attorney in this application

Signature	Name	Registration #
/Ann Robl/	ANN ROBL	71541

PTO/AIA/80 (07-12)
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POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(c).

I hereby appoint:

☒ Practitioners associated with Customer Number: 189081

OR

☐ Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

As attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignments documents attached to this form in accordance with 37 CFR 3.73(c).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(c) to:

☒ The address associated with Customer Number: 189081

OR

☐	Firm or Individual Name			
	Address			
	City		State	Zip
	Country			
	Telephone		Email	

Assignee Name and Address: Pictometry International Corp.
25 Methodist Hill Drive
Rochester, NY 14623

A copy of this form, together with a statement under 37 CFR 3.73(c) (Form PTO/AIA/96 or equivalent) is required to be Filed in each application in which this form is used. The statement under 37 CFR 3.73(c) may be completed by one of The practitioners appointed in this form, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature	/Rebecca Unruh/	Date	August 10, 2022
Name	Rebecca Unruh	Telephone	
Title	Deputy General Counsel, IP and Transactions, Pictometry International Corp.		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. 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 1.11 and 1.14. This collection is estimated to take 3 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.

Doc Code: TRAN.LET

Document Description: Transmittal Letter

PTO/SB/21 (07-09)
Approved for use through 11/30/2020. OMB 0651-0031
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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	12/470,984
Filing Date	05/22/2009
First Named Inventor	Dale R. Thornberry
Art Unit	2668 (conf. no. 4950)
Examiner Name	Atiba O. Fitzpatrick
Attorney Docket Number	6338.140

Total Number of Pages in This Submission

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☐ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☑ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
  - ☐ Landscape Table on CD
- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☐ Other Enclosure(s) (please identify below):

Remarks

Electronically Transmitted: August 17, 2022

1) sb21 Transmittal (1 page); and
2) AIA60 POA (1 page).

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	DUNLAP CODDING, P.C.		
Signature	/Ann M. Robl/		
Printed name	Ann M. Robl		
Date	August 17, 2022	Reg. No.	71,541

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature	/Ann M. Robl/		
Typed or printed name	Ann M. Robl	Date	August 17, 2022

This collection of information is required by 37 CFR 1.5. 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 1.11 and1.14. This collection is estimated to 2 hours 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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UNITED STATES
PATENT AND TRADEMARK OFFICE

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

ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
12/470,984	**08/17/2022 04:11:16 PM ET**	**6338.140**

Title of Invention

SYSTEM AND PROCESS FOR ROOF MEASUREMENT USING AERIAL IMAGERY

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	8401222
CONFIRMATION #	4950	FILED BY	Anne Burns
PATENT CENTER #	60882705	FILING DATE	05/22/2009
CUSTOMER #	189081	FIRST NAMED INVENTOR	Dale R. Thornberry
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	ANN ROBL

Documents

TOTAL DOCUMENTS: 2

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
6338140_sb21_Transmittal_08172022.pdf	1	Transmittal Letter	162 KB
6338140_AIA80_POA_08172022.pdf	1	Power of Attorney	87 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
6338140_sb21_Transmittal_08172022.pdf	EA990032680C515157238796A76505CFAA7F4FDD6D54B7362CE508DBF1FB6E52B74BA497BD77B18740B4816932D9318B5106

1341FC6690DA531DD103EA12A1E9

6338140_AIA80_POA_08172022.pdf	B0AA1547BB9B3ED9EC8D889C4718D0781BFF271C4EB52894FD713208BEF7A694BB014BC7982BAD0C91876610D9CF2918E3538370157619E53B9ED32E4DA75EC3

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 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

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/470,984	05/22/2009	Dale R. Thornberry	6338.140

CONFIRMATION NO. 4950

POWER OF ATTORNEY NOTICE

189081
EagleView
PO BOX 16370
OKLAHOMA CITY, OK 73113

OC000000135979230

Date Mailed: 08/23/2022

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 08/17/2022.

- The Power of Attorney to you in this application has been revoked by the applicant. 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**.

/sltorres/

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/470,984	05/22/2009	Dale R. Thornberry	6338.140

CONFIRMATION NO. 4950

189081
EagleView
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POA ACCEPTANCE LETTER

OC000000135979239

Date Mailed: 08/23/2022

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 08/17/2022.

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**.

/sltorres/