

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Texas Association of REALTORS®

Petitioner,

v.

IP3, SERIES 100 OF ALLIED SECURITY

TRUST I,

Patent Owner

Case IPR2016-00615

Patent No. 8,510,045

MOTION TO AMEND PATENT UNDER 37 C.F.R. § 42.121

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I. INTRODUCTION

IP3, Series 100 of Allied Security Trust I (hereinafter “Patent Owner”) brings the within Motion to Amend in compliance with 35 U.S.C. § 316 and 37 C.F.R. § 42.121. Patent Owner offers the within motion and accompanying arguments in the alternative to those arguments raised in Patent Owner’s Motion to Dismiss, Preliminary Response to the Petition and Supplemental Response to the Petition.

Should independent claims 1, 11, and 22 of U.S., Patent No. 8,510,045 (“the ‘045 patent”) be held unpatentable, the Patent Owner proposes substitute independent claims 29, 30 and 31 to replace original independent claims 1, 11 and 22, respectively. The proposed substitute independent claims incorporate limitations that clearly distinguish the claimed invention over all known prior art references, and do not broaden the scope of the claims, with the disclosure supporting each proposed amendment. As such, the references asserted in the within *Inter Parties Review*, along with all other prior art references known to Patent Owner, fail to anticipate or render the substitute claims obvious.

Patent Owner has met its burden of proving patentability of the substitute claims and requests the within motion be granted. *See Idle Free Sys. Inc. v Bergstrom, Inc.*, IPR2012-00027 Decision Motion to Amend Claims, Paper 26, June 11,

2013; *MasterImage 3D, Inc. v. RealD, Inc.*, IPR2015-00040 Order Conduct of Proceedings, Paper 42, July 2015. *See also Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1303-05 (Fed. Cir. 2015)

II. PROPOSED SUBSTITUTE INDEPENDENT CLAIMS 29, 30 AND 31 DO NOT EXPAND THE SCOPE OF THE CLAIMS OF THE '045 PATENT

Proposed substitute independent claim 29, the proposed substitute for independent claim 1, retains or narrows all of the limitations of claim 1, as shown below:

A) Substitute Independent Claim 29

A method of displaying points-of-interest ("POI"s) on a digital map, comprising:

displaying a digital map within a given view and at a given scale, on a graphical display of an electronic device;

receiving user input containing a search query;

receiving user input defining a polygonal geographic region from within the current view and current scale of the digital map;

determining a rectangular region, smaller than the current view and current scale of the digital map and larger than the polygonal geographic region, which encapsulates the polygonal geographic region;

providing one or more search results associated with the search query **and the rectangular region**, the search results containing geographic coordinates;

~~receiving user input defining a geographic region within the digital map, wherein the geographic region is defined from within the current view and current scale of the digital map, and wherein the geographic region is represented by a polygon;~~

determining the one or more search results whose geographic coordinates are within the user defined polygonal geographic region; and

displaying the determined one or more search results as one or more graphics on the digital map; wherein the one or more graphics represent one or more POIs.

Proposed substitute independent claim 29 replaces the deleted clause “~~receiving user input defining a geographic region within the digital map, wherein the geographic region is defined from within the current view and current scale of the digital map, and wherein the geographic region is represented by a polygon~~” with the new clause “receiving user input defining a polygonal geographic region from

within the current view and current scale of the digital map". This particular change is made for sake of brevity and to introduce clearer antecedent basis for the remainder of proposed substitute independent claim 29. The phrase "and wherein the geographic region is represented by a polygon" has been replaced with a single adjective "polygonal" and without the verb "represented by". Furthermore, the phrase "within the digital map" is redundant with the phrase "from within the current view and current scale of the digital map", and therefore is omitted from the new clause for sake of brevity only.

B) Substitute Independent Claim 30

Proposed substitute independent claim 30, the proposed substitute for independent claim 11, adds the new clause "the demarcated region smaller than the presently displayed digital map, and larger than the polygonal area and completely enclosing the polygonal area".

C) Substitute Independent Claim 31

Proposed substitute independent claim 31, the proposed substitute for independent claim 22, introduces "within a given view and a given scale" of the digital map to harmonize with a similar clause in independent claim 1 and proposed substitute independent claim 29. Furthermore, proposed substitute independent claim 31 includes the amended clause: "delimiting the portion of the digital map selected by the user, **wherein the delimited portion comprises a rectangular portion**

larger than the free-hand user input and smaller than the current view and current scale of the digital map”.

As the scope of the proposed substitute independent claims 29, 30 and 31 are narrower than the scope of each corresponding original independent claim, the substitute claims do not enlarge the scope of the ‘045 patent.

III. THE SPECIFICATION SUPPORTS THE NEW LIMITATIONS OF PROPOSED SUBSTITUTE INDEPENDENT CLAIMS 29, 30 AND 31

Each of the proposed substitute independent claims are supported by the original disclosure of the ‘045 patent. Support for the proposed substitute independent claims is summarized below.

A) Substitute Independent Claim 29

Proposed substitute independent claim 29 replaces the deleted clause “~~receiving user input defining a geographic region within the digital map, wherein the geographic region is defined from within the current view and current scale of the digital map, and wherein the geographic region is represented by a polygon~~” with the new clause “receiving user input defining a polygonal geographic region from within the current view and current scale of the digital map”. This particular change is made for sake of brevity and to introduce clearer antecedent basis for the remainder of proposed substitute independent claim 29. No enlargement in scope

is intended by this particular change. Support for the new clause may be found at least in the deleted clause as shown below in Table A. The phrase “and wherein the geographic region is represented by a polygon” has been replaced with a single adjective “polygonal” and without the verb “represented by” (*See* Table A). Furthermore, the phrase “within the digital map” highlighted in italics in Table A is redundant with the phrase “from within the current view and current scale of the digital map” and therefore is omitted from the new clause for sake of brevity only (*See* Table A).

Proposed substitute independent claim 29 also includes a new clause “receiving user input defining a polygonal geographic region from within the current view and current scale of the digital map”. Support for this amendment is highlighted in Table A and may be found in the as-filed application at least within ¶¶[046]-¶¶[051] and FIGS. 4A-4C of the as-filed application (corresponding to col. 5, lines 39-60 and FIGS. 4A-4C of the ‘045 patent specification).

Lastly, proposed substitute independent claim 29 includes the amended clause: “determining the one or more search results whose geographic coordinates are within the user defined polygonal geographic region”. This amendment harmonizes the clause with the antecedent basis provided in the new clause discussed in Table A.

The proposed substitute independent claim 29 narrows the scope of independent claim 1 because independent claim 1 of the '045 patent does not explicitly recite first limiting the results to a rectangular region that bounds the user-defined region, before determining search results within the user-defined polygonal region. Furthermore, the user-selected geographic region (i.e., region 406) is recited as being a **polygonal** geographic region, and not merely as being represented by a polygon. Region 406, when entered by finger tracing on a screen (e.g., steps 716-720 of FIG. 7A), inherently is a polygon having vertices determined by the pixels or resolution of the screen that digital map 400 is displayed upon. In contrast, a geographic region defined by a central point (e.g., a user's present location) and a radius around the central point (e.g., within one mile of the user's present location) is not necessarily definable as a polygon.

TABLE A

Substitute Independent Claim 29	Support in Deleted Clause (independent claim 1)
receiving user input defining	receiving user input defining
a polygonal geographic region	a geographic region <i>within the digital map</i> , wherein the geographic region is defined . . . , and wherein the geographic region is represented by a polygon
from within the current view and current scale of the digital map	. . . from within the current view and current scale of the digital map . . .

TABLE A (cont.)

Substitute Independent Claim 29	Support in '045 Patent
determining a rectangular region,	FIG. 4B, the rectangular region formed from diagonally opposite grid components (x2,y1,z) and (x4,y4,z).
smaller than the current view and current scale of the digital map	The current view and current scale of the digital map is shown in FIG. 4A as grid items (x1,y1,z) through (x5,y4,z). The determined rectangular region is smaller because FIG. 4B does not include the x1 and x5 columns.
and larger than the polygonal geographic region, which encapsulates the polygonal geographic region	<p>The polygonal geographic region is disclosed as selected region 406. Inspection of FIG. 4B shows the determined rectangular region (i.e., having diagonally opposite grid components (x2,y1,z) and (x4,y4,z)) is larger than selected region 406 and completely encapsulates selected region 406.</p> <p><i>See also ¶[049], p.10, lines 17-18, of the as-filed application (corresponding to col. 5, lines 45-47 of the '045 patent), which discloses “a rectangular area, comprising map tiles (x2,y1,z)-(x4,y4,z) and encapsulating the entire selected region 406”</i></p>

TABLE A (cont.)

Substitute Independent Claim 29	Support in '045 Patent
providing one or more search results associated with the search query and <u>the rectangular region</u> , the search results containing geographic coordinates	FIG. 4B, the rectangular region formed from diagonally opposite grid components (x2,y1,z) and (x4,y4,z). <i>See also ¶[050]-¶[051], p.10 lines 23-28 of the as-filed application (corresponding to col. 5, lines 51-57 of the '045 patent), noting the search results do not include point "D" because point D is not within the rectangular region formed by (x2,y1,z)-(x4,y4,z).</i>

B) Substitute Independent Claim 30

Proposed substitute independent claim 30 adds the new clause "the demarcated region smaller than the presently displayed digital map, and larger than the polygonal area and completely enclosing the polygonal area" support for which is found in Table B below.

Proposed substitute claim 30 narrows the scope of claim 11 because claim 11 of the '045 patent does not explicitly recite the demarcated region is smaller than the presently displayed digital map, while still completely enclosing the polygonal area, before determining search results within the user-defined demarcated region.

TABLE B

Substitute Claim 30	Support in '045 Patent
the demarcated region	FIG. 4B, the rectangular region formed from diagonally opposite grid components (x2,y1,z) and (x4,y4,z), is the demarcated region.
smaller than the presently displayed digital map,	The presently displayed digital map is shown in FIG. 4A as grid items (x1,y1,z) through (x5,y4,z). The demarcated region is smaller because FIG. 4B does not include the x1 and x5 columns.
and larger than the polygonal area	The polygonal area is disclosed as selected region 406. Inspection of FIG. 4B shows the demarcated region (i.e., having diagonally opposite grid components (x2,y1,z) and (x4,y4,z)) is larger than the polygonal area (i.e., selected region 406).
and completely enclosing the polygonal area	FIG. 4B shows the demarcated region (i.e., having diagonally opposite grid components (x2,y1,z) and (x4,y4,z)) completely encapsulates the polygonal area (i.e., selected region 406). <i>See also ¶[049], p.10, lines 17-18, of the as-filed application (corresponding to col. 5, lines 45-47 of the '045 patent specification), which discloses “a rectangular area . . . encapsulating the entire selected region 406”</i>

C) Substitute Independent Claim 31

Proposed substitute independent claim 31 introduces “within a given view and a given scale” of the digital map to harmonize with a similar clause in independent claim 1 and proposed substitute independent claim 29, and to provide antecedent basis for the amended clause discussed below in relation to Table C below. Furthermore, proposed substitute independent claim 31 includes the amended clause: “delimiting the portion of the digital map selected by the user, **wherein the delimited portion comprises a rectangular portion larger than the free-hand user input and smaller than the current view and current scale of the digital map**”. (See Table C.)

Furthermore, proposed substitute independent claim 31 adds the clause “providing one or more POIs associated with the search query and the delimited portion”. Support for this amendment may be found in the as-filed application at least by comparison of FIGS. 4A and 4B, showing that POI “D” of FIG. 4A is omitted from FIG. 4B, because point D is not within the delimited portion.

This amendment narrows the scope of independent claim 22 of the ‘045 patent because independent claim 22 does not explicitly recite the delimited portion is smaller than the current view and current scale of the digital map, yet still is a rectangular portion larger than the free-hand user input, before determining search results within the delimited portion. Nor does independent claim 22 of the ‘045

patent first limit the returned results to the delimited portion, before determining search results within the portion of the digital map selected by the user (i.e., the free-hand user input).

TABLE C

Substitute Independent Claim 31	Support in '045 Patent
wherein the delimited portion	FIG. 4B, the rectangular region formed from diagonally opposite grid components (x2,y1,z) and (x4,y4,z), is the delimited portion.
comprises a rectangular portion larger than the free-hand user input	The free-hand user input is disclosed as selected region 406. Inspection of FIG. 4B shows the delimited portion (i.e., having diagonally opposite grid components (x2,y1,z) and (x4,y4,z)) is larger than the free-hand user input (i.e., selected region 406).
and smaller than the current view and current scale of the digital map	The current view and current scale of the digital map is shown in FIG. 4A as grid items (x1,y1,z) through (x5,y4,z). The determined rectangular region is smaller because FIG. 4B does not include the x1 and x5 columns.

IV. PROPOSED SUBSTITUTE INDEPENDENT CLAIMS 29, 30 AND 31 ARE PATENTABLE OVER THE PRIOR ART REFERENCES

The Petition for *inter partes* review of U.S. Patent No. 8,510,045, case IPR2016-00615, identified eight grounds to challenge the '045 patent, and relied upon the following references:

- U.S. Patent No. 7,373,246 B2, issued May 13, 2008 (Ex. 1003, “O’Clair”);
- U.S. Patent Application Publication No. 2010/0094548 A1, filed July 9, 2009, published April 15, 2010 (Ex. 1004, “Tadman”);
- U.S. Patent Application Publication No. 2009/0153492 A1, filed December 13, 2007, published June 18, 2009 (Ex. 1005, “Popp”);
- International Patent Application Publication No. WO 97/48065, published December 18, 1997 (Ex. 1006, “DeLorme”);
- U.S. Patent Application Publication No. 2009/0132927 A1, filed November 16, 2007, published May 21, 2009 (Ex. 1007, “Reed”);
- U.S. Patent No. 6,791,536 B2, issued September 14, 2004 (Ex. 1008, “Keely”);
and
- U.S. Patent Application Publication No. 2005/0270311 A1, filed February 5, 2005, published December 8, 2005 (Ex. 1009, “Rasmussen”).

Furthermore, during prosecution of application 12/799,471, the Examiner relied upon the following references:

- U.S. Patent Application Publication No. 2006/0200383 to Aruntunian (“Aruntunian”); and
- U.S. Patent Application Publication No. 2006/0192769 to Pinkus (“Pinkus”).

O’Clair in FIG. 5 discloses a flowchart of an exemplary process for identifying the location of one or more businesses within the visible boundaries of a displayed map wherein the process begins with providing a map document to a user that includes a selected geographic location (block 500). A user may re-select the map boundaries (block 510) by "moving" east, north, south 50 or west of zoom level map view 640, or by "zooming in" or "zooming out" of zoom level map view 640. *See*, e.g., col. 6, line 25 – col. 7, line 26. Notably, O’Clair fails to disclose or suggest “**a polygonal geographic region** from within the current view and current scale of the digital map” and “**a rectangular region, smaller than** the current view and current scale of the digital map and larger than the polygonal geographic region, which encapsulates the polygonal geographic region” as recited in proposed claim 29 and similarly in proposed claims 30 and 31.

Tadman FIGS. 3-8 illustrate various embodiments of a real estate searching tool (*see* Tadman, ¶[0015]-¶[0020]). Although a user may specify a polygonal

search area (*see*, e.g., FIGS. 4-5), there is no disclosure in Tadman of a rectangular region, smaller than the displayed map, that encloses the polygonal search area.

Popp discloses an interactive media display system provided to display media associated with a selected geographic area based on a gesture input of user. A user defines a geographic boundary 54 by use of a manually-drawn boundary gesture input 78. Top of FIG. 2 illustrates geographic boundary 54 and boundary gesture input 78 as being identical. Geographic boundary 54 encloses a geographic area 56 (*see*, e.g., FIG. 2, top; FIG. 5), or a rectangular shape (FIG. 3) or other shape FIG. 4). Once geographic area 56 is denoted, media related to the geographic area 56 is displayed, as depicted in the bottom half of FIG. 2. *See* ¶[0031]:

At the bottom in FIG. 2, the filtered media data collection 70 of media 66 associated with the selected geographic area 56 are displayed on the touch-sensitive display surface 14. In the depicted embodiment, the filtered media data collection 70 includes preview images of photographs, full versions of which can be displayed upon selection by a user.

Notably, once a geographic boundary 54 is selected, Popp fails to disclose or suggest any “**rectangular region, smaller than** the current view and current scale of the digital map and larger than the polygonal geographic region, which encapsulates the polygonal geographic region” as recited in proposed substitute

independent claim 29 and similarly in proposed substitute independent claims 30 and 31.

DeLorme discloses a Computer Aided Routing and Positioning System (CARPS) that determines a route along selected waypoints, the route including a travel origin and a travel destination and intermediate waypoints there between. A listing of points of interest along the way may be displayed (*see, e.g.,* FIGS. 1G – 1J). Notably, DeLorme fails to disclose or suggest a polygonal geographic region, nor any “**rectangular region, smaller than** the current view and current scale of the digital map and larger than the polygonal geographic region, which encapsulates the polygonal geographic region” as recited in proposed substitute independent claim 29 and similarly in proposed substitute independent claims 30 and 31.

Reed discloses a mapping interface in which a user may define a polygonal geographic region, and results are returned within the polygonal region (*e.g., see* FIGS. 32-34 and ¶[0170]-¶[0172]). Notably, Reed fails to disclose or suggest a polygonal geographic region, nor any “**rectangular region, smaller than** the current view and current scale of the digital map and larger than the polygonal geographic region, which encapsulates the polygonal geographic region” as recited in proposed substitute independent claim 29 and similarly in proposed substitute independent claims 30 and 31.

Keely discloses a method and apparatus for simulating at least one gesture of a pointing device such as a mouse (*Abstract*). Keely fails to disclose or suggest using the simulated gestures with a digital map in order to select regions of any size or shape for querying for points of interest. In particular, Keely fails to disclose or suggest a polygonal geographic region, nor any “**rectangular region, smaller than** the current view and current scale of the digital map and larger than the polygonal geographic region, which encapsulates the polygonal geographic region” as recited in proposed substitute independent claim 29 and similarly in proposed substitute independent claims 30 and 31.

Rasmussen discloses a digital mapping system. Map tiles are received in response to a location request, and the map tiles are assembled to form a map image (see, e.g., ¶[0013]). Although Rasmussen discloses clipping shapes (e.g., clipping shape 1305), the clipping shapes are used to determine a portion of the digital map to be displayed. For example, the clipping shape is “through which the user will see the map image 805, and which defines the shape of the user's map view” (¶[0094]). However, Rasmussen fails to disclose or suggest accepting a user-defined polygonal portion of a digital map, for retrieving points of interest within the polygon. Nor does Rasmussen disclose or suggest any “**rectangular region, smaller than** the current view and current scale of the digital map and larger than the polygonal geographic region, which encapsulates the polygonal geographic re-

gion” as recited in proposed substitute independent claim 29 and similarly in proposed substitute independent claims 30 and 31.

Aruntunian discloses a mapping system. Although a user may define an irregularly shaped area of the map (*see*, e.g., ¶[0034]), Aruntunian fails to disclose or suggest any “**rectangular region, smaller than** the current view and current scale of the digital map and larger than the polygonal geographic region, which encapsulates the polygonal geographic region” as recited in proposed substitute independent claim 29 and similarly in proposed substitute independent claims 30 and 31.

Pinkus discloses a navigation device programmed with a map database and software that enables a route to be planned between two user-defined places (*Abstract*). Pinkus fails to disclose or suggest any “**rectangular region, smaller than** the current view and current scale of the digital map and larger than the polygonal geographic region, which encapsulates the polygonal geographic region” as recited in proposed substitute independent claim 29 and similarly in proposed substitute independent claims 30 and 31.

Furthermore, in the October 3, 2012 Office Action of the ‘045 patent, the Examiner cited, but did not rely upon, the following additional U.S. patents or patent applications:

- Publication No. 2003/0036848 to Sheha et al. (“Sheha I”);

- Publication No. 2004/0030493 to Pechatnikov et al. (“Pechatnikov I”);
- Publication No. 2004/0204836 to Riney, Terrance Patrick (“Riney”);
- Patent No. 7,082,365 to Sheha et al. (“Sheha II”);
- Patent No. 7,089,110 to Pechatnikov et al. (“Pechatnikov II”)
- Publication No. 2009/0210388 to Elson et al. (“Elson”);
- Publication No. 2009/0319166 to Khosravy et al. (“Khosravy”);
- Publication No. 2011/0153186 to Jakobson, Gabriel (“Jakobson I”);
- Patent No. 8,014,943 to Jakobson, Gabriel (“Jakobson II”);
- Publication No. 2011/0264370 to Jakobson et al. (“Jakobson III”);
- Publication No. 2011/0313657 to Myllymaki et al. (“Myllymaki”); and
- Publication No. 2012/0046861 to Feldbauer, Thomas (“Feldbauer”).

Jakobson I is the published application corresponding to the ‘045 patent. Feldbauer and Myllymaki have a priority date after the filing date of provisional application 61/284,755 to which the ‘045 patent claims priority. Thus, Jakobson I, Feldbauer and Myllymaki are not prior art to the ‘045 patent. Patent Owner has studied the remainder of these references, and submits none of these references disclose or suggest any of the new or amended clauses in the proposed substitute claims.

APPENDIX**CLAIM LISTING**

Proposed substitute independent claims 29, 30 and 31 are shown in markup form as compared to the original independent claims 1, 11 and 22 for which they are a proposed substitute. For purposes of clarity and ease of reference, the dependent claims 2, 3, 5-7, 12-15, 18, 21, 23-28 have been amended to correspond with the proposed substitute independent claims 29, 30 and 31, respectively.

1. (Cancelled) A method of displaying points-of-interest (“POI”s) on a digital map, comprising:
 - displaying a digital map within a given view and at a given scale, on a graphical display of an electronic device;
 - receiving user input containing a search query;
 - providing one or more search results associated with the search query, the search results containing geographic coordinates;
 - receiving user input defining a geographic region within the digital map, wherein the geographic region is defined from within the current view and current scale of the digital map, and wherein the geographic region is represented by a polygon;
 - determining the one or more search results whose geographic coordinates are within the user defined geographic region;

and displaying the determined one or more search results as one or more graphics on the digital map; wherein the one or more graphics represent one or more POIs.

2. (Currently Amended) The method of claim 1 29, wherein in response to receiving additional user input defining a secondary geographic region:

determining a new set of one or more search results whose geographic coordinates are within the secondary geographic region; and

displaying the new set of determined one or more search results as POIs on the digital map.

3. (Currently Amended) The method of claim 1 29, wherein the graphical display is capable of receiving user touch input.

4. The method of claim 3, wherein the user input selecting the geographic region is received via user touch.

5. (Currently Amended) The method of claim 1 29, wherein in response to receiving the user input defining the geographic region within the digital map, highlighting the defined geographic region.

6. (Currently Amended) The method of claim 1 29, wherein in response to receiving the user input defining the geographic region within the digital map, displaying a border outlining the defined geographic region.

7. (Currently Amended) The method of claim 4 ~~29~~, wherein the geographic region corresponds to a route on the digital map.

8. The method of claim 7, wherein the geographic region is automatically set to include a route and a set amount of additional area adjacent to the route.

9. The method of claim 8, wherein in response to a change in the route on the digital map, the geographic region is updated to include a changed route.

10. The method of claim 9, wherein the change in the route is invoked by additional input from the user.

11. (Cancelled) A method of displaying points-of-interest (“POI”s) on a digital map, comprising:

displaying a digital map on a graphical display of an electronic device;

receiving a first user input requesting suspending future processing of map control commands in subsequent user input;

suspending the future processing of the map control commands;

receiving a second set of user input, wherein the second set of user input defines a polygonal area within a presently displayed portion of the digital map;

demarcating a region of the presently displayed portion of the digital map approximately matching the polygonal area defined by the second set of user input;

computing a mathematical representation of the demarcated region, wherein the mathematical representation is based on longitude and latitude coordinates;

receiving a third user input requesting un-suspending the future processing of the map control commands in subsequent user input; un-suspending the future processing of the map control commands;

presenting a set of POIs, wherein each POI is represented by longitude and latitude coordinates;

determining from the set of POIs a further subset of POIs, wherein the longitude and latitude coordinates of each of the POIs within the further subset of POIs is determined to be within the computed mathematical representation of the demarcated region; and

displaying the subset of POIs on the digital map.

12. (Currently Amended) The method of claim ~~11~~ 30, wherein the map control commands include zooming and panning.

13. (Currently Amended) The method of claim ~~11~~ 30, wherein at least one of the first or the second or the third user inputs are touch-based.

14. (Currently Amended) The method of claim ~~11~~ 30, wherein a visual indication is displayed to the user indicating a state of operation of the digital map as suspending or un-suspending the future map control commands.

15. (Currently Amended) The method of claim ~~11~~ 30, wherein a “select” control is displayed in association with the digital map.

16. The method of claim 15, wherein in response to a first selection of the “select” control, the second user input is received.

17. The method of claim 16, wherein in response to a secondary selection of the “select” control, the third user input is received.

18. (Currently Amended) The method of claim ~~11~~ 30, wherein a “clear” control is displayed in association with the digital map.

19. The method of claim 18, wherein in response to a selection of the “clear” control, all data received from the second set of user input is discarded.

20. The method of claim 19, wherein in response to discarding all the data received from the second set of user input, all POIs displayed on the digital map in response to the second set of data, are deleted from the digital map.

21. (Currently Amended) The method of claim ~~11~~ 30 further comprising:
receiving the first user input via a first touch; while the first touch persists, treating all successive user touch input as the second set of input; and
when the first touch terminates, treating the first touch termination as the third set of user input.

22. (Cancelled) A method of displaying one or more points-of-interest (“POI”s) on a digital map, in conjunction with a free-hand, arbitrary, user-selected geographic region, comprising:

presenting a digital map on a graphical display of an electronic device, wherein the digital map comprises map tiles and corresponds to a geographic region;

receiving free-hand user input selecting a portion of the digital map;

delimiting the portion of the digital map selected by the user; determining geographic bounds of the portion of the digital map selected by the user;

determining geographic coordinates of each POI among a plurality of POIs;

determining one or more of the POIs from the plurality of POIs whose geographic coordinates are within the determined geographic bounds of the portion of the digital map selected by the user; and

displaying a graphic for each of the determined one or more POIs, wherein the displayed graphic is displayed on the digital map at the geographic coordinates of each of the determined one or more POIs.

23. (Currently Amended) The method of claim ~~22~~ 31, wherein the graphic display is a touch screen.

24. (Currently Amended) The method of claim ~~22~~ 31, wherein the portion of the digital map selected by the user corresponds to a physical area of the graphical display touched by the user.

25. (Currently Amended) The method of claim ~~22~~ 31, wherein the portion of the digital map selected by the user is a polygon, the polygon containing more than four sides.

26. (Currently Amended) The method of claim ~~22~~ 31, wherein in response to receiving additional user input selecting a different region on the digital map, performing the additional steps of:

delimiting the different region on the digital map, combining the different region with the portion of the digital map selected by the user to form a new selected region; and

determining a new set of one or more POIs corresponding with the new selected region; and displaying the new set of one or more POIs on the digital map.

27. (Currently Amended) The method of claim ~~22~~ 31, wherein in response to receiving additional user input de-selecting a previously-delimited region on the digital map, performing the additional steps of:

removing graphics indicating the delimiting from the de-selected region on the digital map, removing the de-selected region from the por-

tion of the digital map selected by the user to form a new selected region; and

removing one or more POIs on the digital map that are outside the new selected region.

28. (Currently Amended) The method of claim ~~22~~ 31, wherein the step of determining one or more of the POIs whose geographic coordinates are within the portion of the digital map selected by the user, further comprises:

determining one or more of the map tiles that contain the selected region;

transmitting the coordinates of the one or more map tiles to a mapping server;

receiving from the mapping server a new set of one or more POIs whose coordinates are within the coordinates of the map tiles;

discarding from the new set of one or more POIs all POIs that are not within the selected region.

29. (Proposed Substitute for Claim 1) A method of displaying points-of-interest ("POI"s) on a digital map, comprising:

displaying a digital map within a given view and at a given scale, on a graphical display of an electronic device;

receiving user input containing a search query;

receiving user input defining a polygonal geographic region from within the current view and current scale of the digital map;

determining a rectangular region, smaller than the current view and current scale of the digital map and larger than the polygonal geographic region, which encapsulates the polygonal geographic region;

providing one or more search results associated with the search query **and the rectangular region**, the search results containing geographic coordinates;

~~receiving user input defining a geographic region within the digital map, wherein the geographic region is defined from within the current view and current scale of the digital map, and wherein the geographic region is represented by a polygon;~~

determining the one or more search results whose geographic coordinates are within the user defined polygonal geographic region; and

displaying the determined one or more search results as one or more graphics on the digital map; wherein the one or more graphics represent one or more POIs.

30. (Proposed Substitute for Claim 11) A method of displaying points-of-interest ("POI"s) on a digital map, comprising:

displaying a digital map on a graphical display of an electronic device;

receiving a first user input requesting suspending future processing of map control commands in subsequent user input;

suspending the future processing of the map control commands;

receiving a second set of user input, wherein the second set of user input defines a polygonal area within a presently displayed portion of the digital map;

demarcating a region of the presently displayed portion of the digital map approximately matching the polygonal area defined by the second set of user input, **the demarcated region smaller than the presently displayed digital map, and larger than the polygonal area and completely enclosing the polygonal area;**

computing a mathematical representation of the demarcated region, wherein the mathematical representation is based on longitude and latitude coordinates;

receiving a third user input requesting un-suspending the future processing of the map control commands in subsequent user input;

un-suspending the future processing of the map control commands;

presenting a set of POIs, wherein each POI is represented by longitude and latitude coordinates;

determining from the set of POIs a further subset of POIs, wherein the longitude and latitude coordinates of each of the POIs within the further subset of POIs is determined to be within the computed mathematical representation of the demarcated region; and

displaying the subset of POIs on the digital map.

31. (Proposed Substitute for Claim 22) A method of displaying one or more points-of-interest ("POI"s) on a digital map, in conjunction with a free-hand, arbitrary, user-selected geographic region, comprising:

presenting a digital map **within a given view and at a given scale**, on a graphical display of an electronic device, wherein the digital map comprises map tiles and corresponds to a geographic region;

receiving free-hand user input selecting a portion of the digital map;

delimiting the portion of the digital map selected by the user, **wherein the delimited portion comprises a rectangular portion larger than the free-hand user input and smaller than the current view and current scale of the digital map**;

determining geographic bounds of the portion of the digital map selected by the user;

providing one or more POIs associated with the search query and the delimited portion;

determining geographic coordinates of each POI among a plurality of POIs;

determining one or more of the POIs from the plurality of POIs whose geographic coordinates are within the determined geographic bounds of the portion of the digital map selected by the user; and

displaying a graphic for each of the determined one or more POIs, wherein

the displayed graphic is displayed on the digital map at the geographic coordinates of each of the determined one or more POIs.

CERTIFICATE OF SERVICE

The undersigned certifies, in accordance with 37 C.F.R. § 42.6, a copy of the foregoing MOTION TO AMEND PATENT UNDER 37 C.F.R. § 42.121, and accompanying Appendix (Claim Listing), on November 16, 2016, was duly served, via electronic mail, to counsel of record for Petitioner Texas Association of REALTORS®, at the following email addresses:

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Dated: November 16, 2016