UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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GOOGLE INC.
Petitioner

v.

VISUAL REAL ESTATE, INC.
Patent Owner

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CASE IPR2014-01339
Patent 7,389,181

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PATENT OWNER'S PRELIMINARY RESPONSE TO
PETITION FOR *INTER PARTES* REVIEW OF
U.S. PATENT NO. 7,389,181
UNDER 35 U.S.C. §§ 311-319 AND 37 C.F.R. § 42 ET SEQ.

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PTAB CASES

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Exhibit List

EXHIBIT NO.	DESCRIPTION
2001	Tony Quesada, "New cameras capturing appraisal market," Jacksonville Business Journal, June 2, 2008 (http://www.bizjournals.com/jacksonville/stories/2008/06/02/story4.html?page=all)
2002	Declaration of Dr. John R. Grindon in Support of Google's Opening Claim Construction Brief (submitted by Petitioner in *Vederi, LLC v. Google, Inc.*, No. 2:10-cv-07747 (C.D. Cal.), D.I. 50-1)
2003	Transcript of *Markman* Hearing (Nov. 22, 2011), *Vederi, LLC v. Google, Inc.*, No. 2:10-cv-07747 (C.D. Cal.), D.I. 62

Pursuant to 37 C.F.R. § 42.107(a) Patent Owner, Visual Real Estate, Inc. ("VRE"), submits the following preliminary response to the Petition, setting forth reasons why no *inter partes* review should be instituted under 35 U.S.C. § 314.

1.   INTRODUCTION

This is one of two cumulative and meritless petitions for an *inter partes* review of U.S. Pat. No. 7,389,181 ("the '181 Patent," Ex. 1002) filed by Google Inc. ("Petitioner").[1] The present Petition raises five invalidity grounds under 35 U.S.C. §§ 102 or 103, all which are primarily based upon U.S. Patent Application Pub. No. 2002/0047895 A1 to Di Bernardo et al. ("Di Bernardo," Ex. 1005). However, as discussed below, there simply is not a reasonable likelihood that Petitioner will prevail in establishing that Di Bernardo, either alone or in combination with other prior art, invalidates the claims of the '181 Patent.

The '181 Patent discloses and claims a system which was the first to be commercialized and provides precise and accurate street level images of a specific location to users. Specifically, the claimed invention in the '181 Patent identifies "video drive-by-data" (street level images with associated GPS coordinates) of a "geographic location of interest" (a specific residential or business address). Through "post-processing," the video drive-by-data is correlated with precise location information from other sources (property

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[1] All citations to the "Petition" refer to Paper 4, the corrected Petition filed on September 5, 2014, which included corrections to the original petition filed August 20, 2014.

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county parcel data) for the geographic location of interest. Ex. 1002, '181 Patent, 15:14-19; 2:46-47; 1:23; 4:28-37; 3:58-64; 2:16-18; 2:53-55; 9:12-14, 19-22, 28-36; 12:8-19. As a result, the claimed invention, which was commercialized by the inventors, provides complete and accurate street level images corresponding to a specific geographic location of interest.

At its heart, the Petition fails in that it mischaracterizes the claimed invention, does not consider material claim terms, misconstrues the meaning of other claim terms and the arguments are legally and factually flawed due to its reliance on the incomplete and defective analysis in the expert declaration of Dr. Henry Fuchs ("Dr. Fuchs' Expert Declaration," Ex. 1001) which contradicts testimony of Petitioner's other sworn expert, Dr. Grindon (Ex. 2002).

Petitioner's invalidity argument rests upon its primary reference, Di Bernardo. However, Di Bernardo was unable to identify and provide *precise and accurate* street level images of a *specific* geographic location of interest (a house at a specific address). Instead, Di Bernardo was only able to provide images (panoramic views) of *general areas*, such as "street segments" (an entire city block). Thus, the images captured by Di Bernardo would include images of multiple different locations (buildings) within a range of addresses, and there was no way of knowing which (if any) of the buildings shown in the image relate to the location search. This lack of precision was significant since the most common type of search is for a specific address, and not a just a general area. Thus, Di Bernardo fails to

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teach the key limitations in the claims of the '181 Patent, including, the use of "geographic location of interest" data and "post-processing" of video drive-by-data, which combine to provide precise and accurate image data corresponding to a specific geographic locations.

Moreover, the post-processing requirement in the '181 claims involve the use of complex and intensive calculations to correlate to the image data with correct and accurate geographic information. Di Bernardo specifically teaches away from such complex calculations because they involve "computationally intensive," "cumbersome" or "inefficient" processes (Ex. 1005, para. 7). Indeed, in a District Court litigation over patents based on the same specification as Di Bernardo, Petitioner's other expert, Dr. Grindon admitted that Di Bernardo, "in seeking to improve upon the so-called 'computationally intensive' and 'cumbersome' methods of forming composite images in the prior art, teach a *single way* to form composite images that seeks to *minimize this computational burden*." Ex. 2002, para. 39 (emphasis added).[2] While Petitioner's new expert, Dr. Fuchs, now takes the

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[2] Dr. Grindon's Expert Declaration concedes that U.S. Patent Nos. 7,239,760; 7,577,316; 7,805,025; and 7,813,596 all have a common disclosure derived from the original Appl. No. 09/758,717, filed on January 11, 2001, which is the disclosure of Di Bernardo that led to the aforementioned patents and being cited as prior art for all five (5) grounds in the present Petition. Ex. 2002, para. 13.

opposite position, his opinions simply cannot be reconciled with the sworn admissions made by Petitioner through its prior expert, Dr. Grindon.

This Petition ignores Dr. Grindon's description of Di Bernardo. Di Bernardo discloses two embodiments involving significantly less processing, as compared to the '181 claims. And even then, the computations used in Di Bernardo only, at best, point the users to *approximate* locations within the block segment, as opposed to a *precise and accurate* location. Indeed, as Dr. Grindon told the District Court:

> The way of generating composite images taught by the patents in suit [Di Bernardo] suffers from a distortion problem because it requires moving the camera along a path, i.e., along a trajectory, taking pictures along the way, each picture taken at a different position of the camera. . . . This method, in general, *suffers f*rom attempting to *combine images from different positions,* which produce *different perspective views*. . . . Thus, the method of generating composite images by combining images taken from different positions, such as taught in the patents [*Di Bernardo*], *has limited use in practice*, primarily for flat or nearly flat surfaces, such as for document scanning.

Ex. 2002, para. 41. (emphasis added).

As Dr. Grindon explained, Di Bernardo teaches two mutually exclusive "alternative for formation of composite images." (Ex. 2002, para. 38). One does not even include any "post-processing" as that term is used in Di Bernardo. And while the second embodiment vaguely refers to a "post-processing system 38," it is really a fundamentally different kind of "post processing." In this regard, Di Bernardo does not process image data *after* it is stored

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in a server, nor does Di Bernardo "*convert*" the video drive-by-data to a "post processed video data corresponding to a desired image format," as required by the claims of the '181 Patent.

Petitioner de facto recognizes that the post-processing required by the '181 Patent is not taught in Di Bernardo, and therefore tries to fill this significant gap by improperly combining Di Bernardo with Kawabe (Ex. 1008) in its fourth and fifth alternative grounds (Pet. 26-30). However, as discussed herein, such combination is improper because Petitioner conflates Di Bernardo's two mutually exclusive embodiments into one. However, doing so would render Di Bernardo inoperable, and further because combining it with Kawabe would be contrary to the teachings of Di Bernardo which explicitly teach away from adding any additional computational processing, as Petitioner's other expert argued in litigation regarding Di Bernardo. Ex. 2002, 11:22-12:5, 7:25-8:6. *See In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994) ("[A] reference will teach away if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the applicant.").

All of Petitioner's grounds rely on Petitioner's and Dr. Fuch's distorted interpretation of Di Bernardo. For example, in addition to the foregoing, Dr. Fuchs asserts that Di Bernardo teaches "at least one video storage server that stores video image files containing video drive-by data that corresponds to a geographic location of interest" (element 1.2 of Claim 1). As "support" for his opinion, Dr. Fuchs relies upon the first embodiment discussed

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above where video is sent directly to a computer with a video acquisition card. Ex. 1001, para. 69 (citing Di Bernardo, para. 38). Clearly, a video acquisition *card* is not a "video storage *server*" under *any* reasonable interpretation of this term.

In addition, as discussed below, several arguments found in Grounds 2-5 include *conclusory* statements and improperly incorporate portions of Dr. Fuchs' Expert Declaration in an effort to backfill missing subject matter, thus failing to address how combinations of references meet the claims or to provide the required obviousness analysis under 35 U.S.C. § 103. This flaw is fatal to the Petition for those grounds.

Finally, Petitioner has failed to provide interpretations of "geographic location of interest," a material claim term at issue. As taught throughout the '181 Patent, the "geographic location of interest" is identified utilizing parcel information from third party resources. *Id.*, 2:46-47; 1:23; 4:28-37; 3:58-64; 2:16-18; 2:53-55; 9:12-14, 19-22, 28-36; 12:8-19. This was a significant technological improvement over the systems described in Di Bernardo, which were not able to accurately identify a geographic location of interest, as the Di Bernardo systems store imagery according to segments and require the use of offset value approximations to retrieve the imagery. Below, Patent Owner offers interpretations of these terms based on their broadest reasonable interpretation in view of the specification. The prior art simply does not teach this limitation.

Thus, for at least the foregoing reasons and the additional reasons discussed below, the Board should not institute review because the Petition fails to meet the reasonable

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likelihood standard required by the Patent Office's regulations to demonstrate a reasonable likelihood that at least one of the claims challenged in the Petition is unpatentable. 37 C.F.R. § 42.108(c). More specifically, the Petition is unsuccessful because:

(1) it fails to properly address the database server element **[1.2]** and post-processing system element **[1.5]** limitations included in '181 independent Claim 1, from which all of the other challenged claims depend on;

(2) critical claim terms are not interpreted in view of the specification; and

(3) several arguments found in Grounds 2-5 include conclusory statements and improperly incorporate portions of Dr. Fuchs' Expert Declaration.

2.   OVERVIEW OF U.S. PATENT NO. 7,389,181

The '181 Patent relates to systems and methods to enable accurate street level views of a geographic location of interest and its surrounding neighborhood. The '181 Patent describes the commercial system developed and implemented by the inventors William D. Meadows and Randall A. Gordie from 2004 through 2009 to enable street level views of a neighborhood surrounding a specific geographic location of interest (a parcel, property lines). *See, e.g.*, Ex. 2001.

The invention is directed to improved systems that allow the processing of a specific address data query received from a user over the internet to provide a precise street level image of **a selected geographic location of interest** in a desired image format generated

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in a **post processing** step using video drive-by data stored in at least one video storage

server for the specific address query. *See, e.g.,* Ex. 1002, Claim 1.

In contrast to the then-existing limitations of the Petition's prior art at the time of

filing, the '181 Patent teaches a system that enables the storing and processing of large

amounts of video drive-by data (street level video imagery and positioning data) to generate

street level **perspective images** of **a geographic location of interest**. Ex. 1002, 6:35-36,

7:20-56. The street level perspective images are enabled via post processing of video

drive-by data of the location of interest using a camera array that includes a plurality of

camera units arranged to provide a 360° view of the neighborhood. Ex. 1002, 3:27-29.   The

post-processing includes correlating the generated images with map data having **property**

parcel boundary information that corresponds to the address query. Ex. 1002, Fig. 5;

8:61-9:8.

The disclosed and claimed solution was the result of the inventors' insightful

understanding of the problem faced by the real estate industry and others. In particular, the

inventors developed a system which could capture and accurately provide views of a

subject property, as it relates to its parcel or property lines, in a desired format so that users,

such as real estate agents, appraisers, potential home purchasers etc., could accurately

identify and evaluate a particular location of interest. Ex. 1002, 1:24-2:39. Thus, two very

important aspects of the claimed invention were (1) to precisely and accurately use parcel

data to link street level views to a selected geographic location or particular location of

interest (Ex. 1002, 1:44-47, 2:16-18, 2:48-62; 9:3, 9:9-36); and (2) to calculate a centroid of

the parcel to identify the appropriate view of the geographic location of interest (which

necessarily includes pre-processing and post-processing of the image with the parcel data

for display) (Ex. 1002, 9:28-50, Fig. 6, 12:9-15, Fig. 10, 12:60-63, 13:56, Fig. 15). Each of

the various applications of the present invention identified in the summary of the invention

requires at least these features. Ex. 1002, 4:11-5:16; *see also, e.g.,* Ex. 1002, 15:14-17:41-

47.

Further, because the present invention requires extensive computational overhead, it

is placed in a "video and data server farm" environment. Ex. 1002, 2:63-3:18, 6:21-39.

A. The '181 Patent teaches how to precisely and accurately link street level perspective views to *a location of interest* by tying them in with parcel map data

The '181 patent recognizes in its background section that existing on-line systems

that allowed users to view properties of interest provided limited views of the relevant

properties. Ex. 1002, 1:24-44.   The '181 Patent taught "it would be desirable to provide a

system that would enable a user to view the surrounding neighborhood as well as the

property itself."   Ex. 1002, 1:45-47.

In contrast, "[t]he present invention may be applied to many applications in which the

remote ability to view a specific location and its surrounding neighborhood is

advantageous." Ex. 1002, 15:14-16. The various applications disclosed require the system

to identify with precision and accuracy the "geographic location of interest," which as used in

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the '181 Patent refers to the subject property as it relates to a parcel/property vector lines. For example, the subject property and its property boundaries corresponding to a specific street address.

In order to obtain with precision and accuracy location information, the '181 Patent teaches the use of parcel data to enable a system which can capture "video drive-by data" that "corresponds to a location of interest." "Preferably, the video data would be encoded with GPS coordinates as well as conventional street addresses and map coordinates to provide instant street level videos of any location upon request." Ex. 1002, 1:51-54. The '181 Patent teaches that "the video drive-by data" includes both "video image data" as well as "positioning data" that corresponds to the location of the camera. Ex. 1002, 3:19-25. In order to translate the "position data" into a location of interest, the '181 Patent teaches combining the captured data with data from "other data sources related to the geographic location" (Ex. 1002, 2:46-47; *see also* Ex. 1002, 1:23) including "county GIS mapping" (Ex. 1002, 4:20-27) and "property county parcel data" (Ex. 1002, 3:58-64; *see also* Ex. 1002, 2:17).

In order to achieve this stated objective, the '181 Patent teaches to tie the street level images to the parcel map data in order to identify a location of interest. For example, it teaches that being "[t]ied in directly to county GIS mapping, the present invention can offer street level video into the neighborhood and directly to the street address, offering photographs of any property transmitted via wireless internet." Ex. 1002, 4:23-26.

With the capability to fully integrate, refine and unify existing county property records and GIS mapping resources, the system can enhance online presentations with parcel line enhanced ortho imagery, property images and now with video. Further, with the system, unification of property records and county mapping can evolve to tie in to one-click access to street level video segments allowing a user to virtually drive down any street, while highlighting any property and its surrounding neighborhood **with parcel lines drawn on the photograph.**

Ex. 1002, 4:29-37 (emphasis added); *see also* Ex. 1002, 8:65-9:2.

By providing a system where "a user can select a parcel" (Ex. 1002, 9:3) and then the system can show "a video view of the property" (Ex. 1002, 9:4-5), the system ties the map data to the imagery to provide a more realistic experience **in relation** to the correct and accurate **street addresses** or **parcels** to the user, through the display of the conventional street map representations and the street level video drive-by data generated by the system. Ex. 1002, 9:3-8.

Thus, the '181 Patent repeatedly explains how "a geographical location of interest" is tied to the exact location of a particular property that is determined by parcel and GIS information:

The invention is based, in part, on providing: 1) accurate differential GPS data; 2) post processing of geo positioning signals to smooth curves in motion (splines); 3) highly accurate camera position and video frame position analysis processing to provide a calculation of the exact position of each video frame; 4) parcel data processing that analyses vector line data that is

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geo-coded with latitude and longitude values; 5) digital image photos

processed with image super imposition algorithms; and 6) a database that

includes video image files, parcel latitude and longitude data, and positioning

data that is indexed to the video image files. With these components, the

invention enables the access to video images of any desired geographic

location and its surrounding neighborhood, while relating such image data to

other property related data such as property lines, landmarks, etc.

Ex. 1002, 2:48-62.

The present invention's use of "parcel" information to provide exact boundaries for

geographic locations of interest was a significant improvement upon the prior art (including

the prior art cited in the Petition). In stark contrast, both Di Bernardo and Lachinski

unequivocally explain the use of "street segments" being suitable only for a "range of

addresses." *See, e.g.,* Ex. 1005, Di Bernardo, paras. 48, 76 (acknowledging the use of

segments does not provide for accurate computations of specific addresses); Ex. 1006,

Lachinski at 12:8-14 and 16:50-60 (acknowledging street segment approximation lacks

accuracy and thus limiting the imagery correlation only as to a range of addresses within the

street segment). Neglecting what even a common person understands to be a specific

address location, when discussing the prior art, both the Petition and Dr. Fuchs' Expert

Declaration refer to a range of addresses as an address as if it was a precise specific

address location. (*Cf.* Pet. 18; Ex. 1001, para. 70).

B. The '181 Patent teaches how to convey accurate image of a geographic location of interest

To convey accurate image portrayal of **a geographic location of interest**, the '181 Patent teaches that the exact latitude and longitude of a centroid of the target parcel can be calculated, for example, by using open source programming tool GDAL. The calculated centroid generally approximates the location of the structure. Given the centroid of the parcel, the orientation and location of the camera view that is pointed toward the centroid of the parcel can also be calculated. The location of the centroid of the parcel and the distance to the parcel is then calculated for the frame. Ex. 1002, 9:28-36.

"Typically homes are located with the foundation over the centroid and thus the automatic camera orientation method provided by the present invention will enable the automatic selection of the correct camera view to present to the user when they are 'driving on-line.'" Ex. 1002, 16:49-54.

None of the art relied upon by Petitioner provides for the determination of the **exact** latitude and longitude **and orientation** and location of the camera in relation to a location of interest as it relates to **a parcel**. The '181 Patent teaches that by "selecting video drive-by data or a given street address by calculating a centroid of a parcel and determining camera orientation and position to enable highly accurate delivery of video that is pointed toward the centroid of a parcel" (i.e., the geographic location of interest). Ex 1002, 3:54-57. To the contrary, the prior art taught away from the so-called "computationally intensive" and

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"cumbersome" methods and provided distorted views that were specific only as to a street block and street segments. *See, e.g.,* Ex. 2002, 12:1-13:3.

C. The '181 Patent's use of "server farm" environment enables its computationally intensive solution

In recognition of the data intensive and computational intensive aspects of the disclosed and claimed invention, the '181 Patent requires "a video and data server farm" comprising "at least one video storage server," "a database server," and "an image processing server" as well as a "pre-processing network" and a "post-processing network." Ex. 1002, Claim 1.

In the "preferred embodiment" disclosed and claimed in the '181 Patent (Ex. 1002, 2:63-3:17), the heavy-duty "video and data server farm" is required because unlike the *Di Bernardo* prior art which sought to avoid "computationally intensive" and "cumbersome" methods (*see, e.g.,* Ex. 1005, Di Bernardo, para. [0008]; Ex. 2002, Grindon Decl., para. 39), the '181 "invention" is "based" on such complexity in order to obtain the most precise and accurate result. *Cf.* Ex. 1002, 2:48-62.

3. CLAIM TERMS REQUIRING CONSTRUCTION CLARIFICATION

When considering whether to institute a patent trial, the Board has indicated that it will interpret the claims of a challenged patent using a "broadest reasonable construction" approach. *Office Patent Trial Practice Guide*, 77 Fed. Reg. 48756, 48766 (Aug. 14, 2012). In applying such a standard, it is important to recognize that the broadest reasonable construction of claim language is not one that permits any reading thereof. Instead, it is one

that must be made "in light of the specification as it would be interpreted by one of ordinary skill in the art." *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). Of course, patent claims must "conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description." 37 C.F.R. § 1.75(d)(1). That is, "[c]laim terms are also given their ordinary and customary meaning as would be understood by one of ordinary skill in the art in the context of the entire disclosure." *Garmin Int'l, Inc. v. Cuozzo Speed Techs. LLC*, IPR2012-00001, Paper 59 at 8 (PTAB Nov. 13, 2013) (citing *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007)).

Given that claims are construed in the context of the description of the invention, it is erroneous to construe claims, as Petitioner urges, in a way that conflicts with the description. *See, e.g.*, *In re Suitco Surface, Inc.*, 603 F.3d 1255, 1260 (Fed. Cir. 2010) (vacating Board decision based on erroneous claim construction and stating: "[t]he broadest-construction rubric coupled with the term 'comprising' does not give the PTO an unfettered license to interpret claims to embrace anything remotely related to the claimed invention. Rather, claims should always be read in light of the specification and teachings in the underlying patent."); *see also, In re NTP, Inc.*, 654 F.3d 1279, 1288 (Fed. Cir. 2011) (vacating Board decision based on erroneous claim construction and stating: "[w]hile the Board must give the terms their broadest reasonable construction, the construction cannot

be divorced from the specification and the record evidence."); *In re Abbott Diabetes Care, Inc.*, 696 F.3d 1142, 1149 (Fed. Cir. 2012) (vacating Board decision based on erroneous claim construction and stating: "[a]lthough the PTO emphasizes that it was required to give all claims their broadest reasonable construction, . . . this court has instructed that any such construction be consistent with the specification and that claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art." (quoting *In re Suitco Surface, Inc.*, 603 F.3d at 1260) (ellipses in original)).

Here, the claims should be construed from the perspective of a person having a bachelor of science in computer science or 4 years of technical experience and professional experience in image processing relating to real property maps.

For the purpose of this proceeding, Patent Owner disputes Petitioner's proposed constructions (to the extent one is provided) for at least the following claim terms: (1) "image processing server," (2) "video drive-by data," (3) "geographic location of interest," and (4) the means-for limitations complying with the requirements of §112 ¶ 6. Patent Owner respectfully submits that the remaining claim constructions presented in the Petition are not material to resolution of this proceeding, but should this Board institute a trial based on such a construction, Patent Owner reserves the right to further challenge other constructions proposed by the Petition.

Taking into account the teachings of the '181 Patent and the *entire disclosure*,

Patent Owner herein sets forth the following preliminary term construction proposals for the

notable exceptions outlined above.

A. "Video drive-by data" (Claim 1)

Petitioner offers an incomplete construction of the term "video drive-by data" to mean

"street level video." (Pet. 9). However, this construction ignores the fact that Claim 1

provides "at least one video storage server that stores video image files containing video

drive-by data that corresponds to a geographic location." (Ex. 1002, 18:4-7). Without

"positional information" in addition to "street level video," the "video drive-by data" lacks

sufficient information to "correspond to a geographic location." Thus, by the terms of Claim

1 Petitioner's proposed construction is on its face incomplete.

Further, the detailed description of the claimed invention also makes clear that the

"video drive-by data" means "street level video corresponding to a geographic location

including the video image data and positioning data."

In describing a summary of the invention that carries out the system and method for

capturing "video drive-by data," the video capture system includes not only a "camera array

that generates video image data" but also "a positioning unit that produces positioning data

corresponding to the location of the camera array." Ex. 1002, 3:19-25. Indeed, the "video

drive-by data" is "produce[ed]" by "a processing unit that processes the video image data

and a positioning data." *Id.*, 3:24-25. It is the combination of the street level video and

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positioning data that "permits synchronization of video images to precise locations of individual frames." *Id.*, 3:29-32. Similarly, the detailed description of "video drive-by data" explains that it includes both video data and positional data (such as GPS data). *See id.*, 6:26-28, 6:35-37.

Thus, the Patent Owner respectfully submits that "video drive-by data" should be construed to mean "street level video corresponding to a geographic location including the video image data and positioning data," to be consistent with Claim 1 and the specification of the '181 Patent.

B. "Geographic location of interest" (Claim 1)

Petitioner does not include a proposed claim construction for the term "geographic location of interest." The first two clauses of independent Claim 1, from which all of the remaining challenged claims depend, include "a geographic location" and "a geographic location of interest." The Patent Owner points out that "the geographic location of interest," is a separate element of Claim 1 and a limitation that is taught repeatedly throughout the disclosure of the '181 Patent as a limitation corresponding to a **subject property at a street address** as it relates to its boundaries or parcel. The Petitioner fails to address this material limitation.

The specification provides that "[f]or **a given parcel or street address**, a video program 0610 determines available video segments that contain images where **the property is in view.**" (Emphasis added.) Ex. 1002, 9:12-14. "Fig. 13 illustrates two ortho

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views 1400 and 1450 of a Video Capture System as it drives in a direction of travel 1410 along a path 1415 past a **selected parcel** where one of six possible cameras may be viewing **a subject property**." Ex. 1002, 12:53-56.

Further, it provides that prior to the '181 Patent, "[c]ompanies and individuals looking for real estate to rent, buy, insure or finance . . . had to physically travel to the property in order to visually verify the condition of the property." Ex. 1002, 1:24-27. Specifically, because "land owners, prospective land owners, insurance, mortgage, county appraisers [all] need to accurately determine where property lines are located in relation to a property." Ex. 1002, 15:17-19. Because of this common need, regardless of what each of these types of individuals calls the referred to **geographic location of interest**, a POSITA would understand when interpreting the specification that a subject property, subject, property, street address, parcel, and parcel boundaries, are all terms in the description that can be associated with a transaction defined by a real estate property defined by metes and bounds.

Because the location of interest in the '181 Patent is a subject property in relation to **parcel boundaries or a subject property at an specific street address**, Patent Owner submits that a "geographic location of interest" means "a geographic location that relates to a subject on a parcel or at an address."

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C. "Image processing server" (Claim 1)

Petitioner asserts that "image processing server" means "a computer system configured to process video image data." Pet.10.

However, this construction is incomplete in view of the terms use in Claim 1. Specifically, Claim 1 requires that the "video image files" be "transfer[ed]" from "the video storage file" previously "store[d]" on the "at least one video storage server" "over a pre-processing network to the image processing file." (Ex. 1002. 18:5-7, 10-15). Thereafter, Claim 1 further requires "the image processing server converts the video drive-by data to post-processed video data corresponding to a desired image format." (*Id.*, 18:16-20).

In this regard, the '181 Patent explains, "The image processing server converts the video drive-by data to post processed video data corresponding to a desired image format, and transfers the post processed video data via post-processing network to the Internet response to the query." Ex. 1002, 3:7-12.

Thus, Patent Owner respectfully submits that properly construed, the "image processing server" means "a computer system configured to process the previously stored video drive-by data and convert it to a desired image format for transfer to a *post-processing* network" as described by the '181 Patent, and required by Claim 1.

D. "Means for" claim elements

Petitioner argues that the "means for" claim elements in claims 7-10 are invalid for lack of written description under 35 U.S.C. § 112, ¶ 6[5]. (Pet.11-15). However, Petitioner's argument is not only improper for raising a ground that is not permitted in an *inter partes* review proceeding under 35 U.S.C. § 311 (b), but also factually and legally incorrect.

In fact, the specification does include corresponding structures for all of the means-plus-function limitations and this is evidenced at least partially by the face of the Petition, which includes claim charts pointing to an allegedly corresponding structure for each step. The Federal Circuit has prescribed that "[i]n a means-plus-function claim in which the disclosed structure is a computer, or microprocessor, programmed to carry out an algorithm, the disclosed structure is not the general-purpose computer, but rather the special purpose computer programmed to perform the disclosed algorithm." *WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999).

Accordingly, Petitioner completely failed to account for at least the inventive aspects included in Patent Owner's term constructions proposed below. Patent Owner respectfully submits that corresponding structure for each of the challenged means-plus-function clause are as follows:

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[5] Because the '181 Patent has a filing date prior to March 16, 2013, this Response refers to the pre-AIA version of 35 U.S.C. §§ 102, 103, and 112.

(i) **"Means for providing a variety of geo-coded data layers in conjunction with the video drive-by data" (Claim 7)**

Software (for example, based on an open source[3]) programming tool MENCODER

operable with a processor to extract video drive-by data and convert, to a desired format,

each image frame file encoded for camera orientation and interpolated location. Ex. 1002,

9:23-27.

(ii) **"Means for creating geo-coded text, image and vector data which is superimposed onto the post processed video data that is transferred to the communications network" (Claim 8)**

A render program (for example, open source programming tool suite OpenGL and

GraphicsMagick) operable with a processor to calculate a location within the image file in

which text or an icon can be placed based on the centroid of a parcel. Ex. 1002, 9:36-50.

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[3] One skilled in the art appreciates an open source reference to be a guide to specific

source code standards (underlying programming code) made available for use, reading the

code, collaborative study, and continuous development. World Intellectual Prop. Org., Open

Source (Oct. 15, 2014, 11:15 AM), http://www.wipo.int/patent-

law/en/developments/open_source.html. Principally, references to open source standards

are technical specifications that are incorporated by reference and provide distinct

limitations, as defined in 100s of lines of code, to one skilled in the art. Moreover "flow

charts or source code listings are not a requirement for adequately disclosing the functions

of software." *Fonar Corp. v. GE,* 107 F.3d 1543, 1549 (Fed. Cir. 1997).

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(iii) "Means for linking latitude and longitude data with video drive-by data"

Software operable with a processor to perform a range calculation from the latitude

and longitude positions of the subject property from video segments that contain images

where the property is in view. Determining where the property is in view, for example, may

be accomplished by using an open source programming tool GDAL which completes a

range calculation from the latitude and longitude positions of the subject property. The

determination is based on a variable distance from the camera position to the nearest line

segment of a parcel. An extractor program (which may be based on an open source

programming tool MENCODER) can convert compressed MPEG2 data into lossless TIFF

image files[4] with each image frame file encoded for camera orientation and interpolated

location. *See* Ex. 1002, 9:9-27.

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[4] Both MPEG and TIFF are computer file formats that are widely recognized in the computer

programming and image processing fields. One skilled in the art would have been able to

recognize, at the time of the invention, the file formats and that several alternative

equivalent formats can be suitable to implement the inventions taught by Patent Owner.

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(iv) "Means for calculating a camera position of designated individual frames of video by using position data points captured before and after a designated frame position"

Software operable with a processor to calculate a set of relative positions by combining the positions of the landmarks with the GPS data using interpolation techniques. *See e.g.*, Ex. 1002, 11:4-17.

4.   ARGUMENT

A. Summary of Petitioned grounds

Petitioner argued to this Board that independent Claim 1 and dependent Claims 3-11 are unpatentable on five grounds. Grounds 1 and 3 challenge Claims 1, 3-7 and 9-11, as being anticipated or obvious in view of Di Bernardo. Ground 2 challenges claim 8 as being obvious over Di Bernardo in view of Lachinski. Petitioners have failed to meet the burden to show reasonable likelihood of success under the statute. [5]

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[5] The "reasonable likelihood" standard was intended by Congress to be a substantially higher barrier to patent validity challenges than the former "substantial new question of patentability" test used for *inter partes* reexaminations. *See* H.R. Rep. No. 112-98 (part 1) at 47 (2011) ("The threshold for initiating an *inter partes* review is elevated from 'significant new question of patentability' – a standard that currently allows 95% of all requests to be granted – to a standard requiring petitioners to present information showing that their challenge has a reasonable likelihood of success.").

All of Petitioner's arguments turn on whether Di Bernardo discloses (and/or renders obvious) all the limitations of Claim 1, the only independent claim raised in the Petition. However, Di Bernardo only describes a system that relies on street segments to store and locate images and does not teach identifying street view images for "a geographic location of interest." While Petitioner's latest expert, Dr. Fuchs (Ex. 1001), attempts to find these features where they do not exist, in a prior litigation involving Di Bernardo, Petitioner's other expert, Dr. Grindon (Ex. 2002), confirms that Di Bernardo lacks the relevant teaching to invalidate the '181 Patent. Moreover, Di Bernardo does not teach or suggest using an "image processing server" to convert the stored video drive-by data to generate "post processed video data corresponding to a desired image format" as required by Claim 1.

In fact, Petitioner de facto recognizes that Di Bernardo is deficient in that it does not in fact teach "post-processing" of stored images with location data as required by the Claim. Thus, Petitioner seeks to cover up this damning deficiency by improperly offering to combine Di Bernardo with Kawabe in Grounds 4 and 5. Ground 4 challenges claims 1, 3-7 and 9-11 as being obvious over Di Bernardo in view of Kawabe, and Ground 5 challenges claim 8 as being obvious over Di Bernardo and Lachinski and in further view of Kawabe. However, like Di Bernardo, both Kawabe and Lachinski also fail to teach identifying street view images for "a geographic location of interest."

Moreover, even if such combination was proper, a combination with Kawabe would be contrary to the teachings of Di Bernardo which explicitly teaches away from adding any

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additional computational processing. This is confirmed by Petitioner's expert, Dr. Grindon, in litigation regarding Di Bernardo. Ex. 2002, 11:22-12:5, 7:25-8:6. Thus, a POSITA would have been taught away from combining Di Bernardo with Kawabe's additional video processing (Ex. 1005, para. 38) that would add to computational overhead for Di Bernardo.

For the reasons set forth herein, the Petition fails to establish a reasonable likelihood that one or more claims of the '181 Patent are more likely than not to be found invalid.

B.   [RE: GROUND 1] Claims 1, 3-7, and 9-11 are Patentable over Di Bernardo

(i)   Analysis of Di Bernardo

Di Bernardo discloses a "system and method synthesizing images of a locale to generate a composite image that provides a panoramic view of the locale." (Ex. 1005, Abstract).   Di Bernardo teaches simple and basic data capture of a general locale such as a street segment or block, instead of detailed data capture of a subject property as it relates to a parcel or a specific street address as taught by the '181 Patent. In other words, Di Bernardo teaches against identifying with precision a geographic location of interest. This lack of precision in identifying a specific address or parcel is significant since the most common online search query by a user is a specific address. Indeed, Di Bernardo captures and retrieves images relying on "street segments" to form and store composite images of those "street segments," which includes ranges of addresses, and are not calculated with any precision as to any particular street address. *See, e.g., id.*, Figs. 13-15, Step 64 in Fig. 3, Step 244 in Fig. 17; *see also id.,* para. 76; *Cf.* Ex. 1001, para. 48 ("Di Bernardo describes

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a similar system for . . . generating **composite images from the collected video data**, and

providing the composite images in response to user queries indicating locations of

interest. (*See, e.g.,* Ex. 1005, Di Bernardo at ¶¶ 32-34, 79.)" (emphasis added)). More

importantly, Di Bernardo teaches against using any "computationally intensive,"

"cumbersome," or "inefficient" processes (Ex. 1005, para. 7) and offers its simplified system

to "alleviate[]" problems with such techniques (*id.*, para. 9).   This point was made by Dr.

Grindon, when he explained to the California Court, "[t]he patent-in-suit [Di Bernardo], in

seeking to improve upon the so-called 'computationally intensive' and 'cumbersome'

methods of forming composite images . . . that seeks to minimize this computational

burden." Ex. 2002, para. 39.

Thus, unlike the '181 Patent which teaches a computationally intensive systems and

methods to determine particular "geographic locations of interest" including the

cumbersome, costly and burdensome process of linking the images to parcel information

from local county GIS maps or other database sources, Di Bernardo is simply seeking a

system that is *not focused* on a subject property and its boundaries (geographic location of

interest) but instead approximates a desired location within a street block.

Di Bernardo describes a one-step process embodiment for capturing the image and

converting each image frame into a single composite image of the relevant neighborhood

block. In the process, position and frame number data are captured by computer 34 (*see*

Ex. 1005, para. 36), while "post-processing system 38" is used to convert the image

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sequences captured and saved to video player 39 which plays videotapes 12, into the "one or more composite images" stored in an image database 32 (*see id.,* para. 37). This simplified process, in the words of Dr. Grindon, "sacrifices image quality in order to reduce computational complexity." Ex 2002, para. 28 ("Indeed the provisional patent application states that '[t]he present method is a compromise between the quality of the synthetic image and algorithmic complexity.'" and "[b]ut for *Vederi*'s 'proposed application, the quality of the panoramic images is sufficient even in presence of some distortion.'" (quoting Declaration of Sasha G. Rao in Support of Google's Opening Claim Construction Brief)). In other words, Di Bernardo teaches a single way to use simple, fast, albeit inferior image processing techniques to get a good enough composite image of the street without precision, which is in turn returned to the user in response to a query. *See, e.g.,* Ex. 2002, para. 41.

The so-called "post processing system 38," while called by a similar name as the claimed "post-processing network" and "post processed video data" in Claim 1 of the '181 Patent, is really a different kind of "post processing." In the context of Di Bernardo, the "post processing" is post image capture. In other words, either at the time the image is captured (with a direct feed to a computer system, Ex. 1005, para. 38, cited in Ex. 1001, para. 69), or after the image is captured on a video tape (with an indirect feed using the video tape player feed to the computer, Ex. 1005, para. 37, cited in Ex. 1001, para. 71), the captured image is processed by the "post processing system 38" to form the "composite images." As Petitioner's other expert, Dr. Grindon explained, these are alternative

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embodiments, (Ex. 2002, paras. 38, 66-67), not complementary embodiments as Petitioner's latest expert asserts in support of the Petition (*see* Ex. 1001, paras. 69-70). The "composite image" is then saved to image database 32 (Ex. 1005, para. 32; Ex. 1001, para. 71), which is "access[ed]" "in response to a user request" by the host computer to "retrieve composite images about the particular location." (*Id.*, para. 79, cited in Ex. 1001, para. 72). Significantly, there is never any "post processing" of video data, after it is stored in the image database 32. Contrary to the invention of the '181 Patent, no further processing of the image is done to create a "desired format," and the previously processed "composite image" is simply retrieved by the host computer. *See id.,* para. 97, Step. 250.

In sum, Di Bernardo differs significantly from the claimed invention of the '181 Patent, in that (1) Di Bernardo fails to store video image data that corresponds to a geographic location (in that the data is stored in segments rather than with precision), and (2) Di Bernardo fails to convert video drive by-data to post-processed video data in a desired image format (in contrast to merely retrieving the composite image of the segment which had been processed and stored in an image database before being stored on a server).

Accordingly, Di Bernardo cannot anticipate or render obvious the '181 Patent claims, including Independent Claim 1 and any of its dependent claims.

(ii)   Independent Claim 1

[1.P]   1. A system including a video and data server farm comprising:

[1.1]   at least one video storage server that stores video image files containing video drive-by data that corresponds to a geographic location;

[1.2]   a database server that processes a data query received from a user over a communications network that corresponds to a geographic location of interest; and

[1.3]   an image processing server;

[1.4]   wherein the database server identifies video image files stored in the video storage server that correspond to the geographic location of interest contained in the data query, and transfers the video image files over a pre-processing network to the image processing server; and

[1.5]   wherein the image processing server converts the video drive-by data to post processed video data corresponding to a desired image format, and transfers the post processed video data via post-processing network to the communications network in response to the query.

> a. **Di Bernardo does not teach**, *inter alia*, **[1.4] "a database server that processes a data query received from a user over a communications network that corresponds to** *a geographic location of interest*" (Claim 1, element 1.4)

As previously discussed above, "geographic location of interest" means "a geographic location that relates to a subject on a parcel or at an address." In view of Petitioner's failure to propose a construction for "geographic location of interest," the Board is respectfully requested to adopt Patent Owner's proposed construction, which is the broadest reasonable interpretation consistent with the specification of the '181 Patent.

Further, the Board should adopt Patent Owner's construction to avoid being forced to engage in supposition of how to effect such analysis for the individual grounds as a substitute for Petitioner's sound and complete analysis. 35 U.S.C. § 312 (a)(3); 37 C.F.R. § 42.104 (b)(4).

As taught in the '181 Patent, the "geographic location of interest" is identified using parcel information coming from third party resources. Ex. 1002, 2:46-47, 1:23, 4:20-27, 3:58-64, 2:17. This was a significant technological improvement over the prior art Di Bernardo system, which created a composite image of a street segment since it was not able to identify the actual subject property that would match a user's query for "a geographic location of interest." Only by willfully ignoring the meaning of "geographic location of interest" as taught in the '181 Patent specification does Petitioner assert that Di Bernardo anticipates or renders obvious the challenged claim.

Di Bernardo discloses a system that relies on street segments. Because of this, when a user searches for a particular address, Di Bernardo returns a composite image of the street segment and has to guess/approximate where the particular address is within that segment. Further, Di Bernardo teaches against identifying with precision a geographic location of interest to a user because it would involve "computationally intensive," "cumbersome," or "inefficient" processes. Ex. 1005, para. 7. In fact, Dr. Grindon, explained to the California Court that "[t]he patents-in-suit [Di Bernardo], in seeking to improve upon the so-called 'computationally intensive' and 'cumbersome' methods of forming composite

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images in the prior art, teach **a single way to form composite images** that *seeks to minimize this computational burden*." Ex. 2002, para. 39 (emphasis added). Thus, unlike the '181 Patent which teaches a computationally intensive systems and methods to determine particular "geographic location of interest," Di Bernardo discloses a system which shows a street segment generally and points the user to a location relatively close to the requested street address but with none of the critically important accuracy as taught and claimed in the '181 Patent.

Di Bernardo does not disclose or suggest processing image data according to a geographic location of interest as required by Claim 1. For example, **nowhere** in Di Bernardo is there any disclosure or suggestion of **parcel data** or a **calculation of a centroid of a parcel** to identify images that correspond to **the geographic location of interest**. In fact, Dr. Fuchs materially misconstrued an address range of a block segment to be the same as the specific address of a subject property of interest and in relation to its property boundaries.

For at least this reason, it is respectfully submitted that the Petition **fails to demonstrate** a reasonable likelihood that independent Claim 1 and its dependent claims are unpatentable as anticipated by or obvious over Di Bernardo under Petitioner's Grounds 1 and 3 (and Ground 2 by extension since it relies upon Ground 1).

b. Di Bernardo does not teach, *inter alia*, [1.5] "wherein the image processing server converts the video drive-by-data to post processed video data corresponding to a desired image format, and transfers the post processed video data via post-processing network to the communications network in response to the query." (Claim 1, element 1.5)

As discussed above in connection with the claim construction and to be consistent with the specification of the '181 Patent, "image processing server" means "a computer system configured to process the previously stored video drive-by data and convert it to a desired image format for transfer to a *post-processing* network." However, nowhere in Di Bernardo is there any teaching or suggestion of converting or processing the previously stored video drive-by data. Since the claimed image processing server is absent in Di Bernardo, Di Bernardo does not anticipate or render obvious Claim 1.

The Petition and claim chart rely on paras. 71 and 74 of Dr. Fuchs' Expert Declaration (Ex. 1001) to conclude that the claimed image processing server and claim element [1.5] are disclosed by Di Bernardo. However, Dr. Fuchs relies on para. 37 of Di Bernardo which teaches using a "post-processing system 38" to convert the captured images and into "one or more composite images" stored in an image database 32. Ex. 1005, para. 37. However, the so-called "post processing system 38" in Di Bernardo, while called by a similar name as the claimed "post-processing network" and "post processed video data" in the claims of the '181 Patent, is really a radically different kind of "post processing."

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Di Bernardo teaches that the "composite image" formed by the "post processing system 38" is saved to image database 32 (*Id.*, para. 37, cited in Ex. 1001, para. 71), which is "access[ed]" "in response to a user request" by the host computer to "retrieve composite images about the particular location." Ex. 1005, paras. 79, cited in Ex. 1001, para. 72. Significantly, there is never any "post processing" of video data in Di Bernardo, *after it is stored in the image database 32.* No further processing of the image is done in the Di Bernardo system to "convert the video drive-by data to post processed video data corresponding to a desired format." Instead, the *previously processed and stored* "composite image" is retrieved by the host computer in Di Bernardo. *See* Ex. 1005, para. 97, Step. 250.

As Petitioner's other expert, Dr. Grindon, testified to the California District Court, another embodiment taught in Di Bernardo even eliminates the "post-processing system 38" of the first embodiment altogether. Ex. 2002, para. 38; Ex. 1005, para. 38. Dr. Fuchs also relied on this alternative embodiment of Di Bernardo in connection with other claim elements. *See, e.g.*, Ex. 1001, para. 73 in connection with claim element [1.4]. However, as explained by Dr. Grindon during litigation (Ex. 2002, paras. 38-39), the second alternative embodiment of Di Bernardo is incompatible with the first embodiment and cannot be considered together. Accordingly, the arguments by Petitioner's current expert, Dr. Fuchs, based on a combination of both of these incompatible embodiments of Di Bernardo are inherently defective and should be given no weight.

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Dr. Fuchs has done nothing more than cite the two incompatible embodiments described in Di Bernardo in a weak attempt to reach the conclusion that a POSITA "would have recognized that *Di Bernardo's* **post-processing system 38 converts** the street-level video data to post processed video data corresponding to a desired format, and transfers the post processed video data via post-processing network to the communications network **in response to the query**." Ex. 1001, para. 74 (emphasis added).

Consequently, Dr. Fuchs' general inherency conclusion inevitably fails. "For anticipation, it is not enough that the prior art reference disclose multiple, distinct teachings that the ordinary artisan might somehow combine to achieve the claimed invention." *Symantec Corp. v. RPost Commc'ns. Ltd.*, IPR2014-00357, Paper No. 14, p. 20, para. 2 (PTAB July 15, 2014) (holding Petitioner did not establish a reasonable likelihood that the pertinent claims were unpatentable as anticipated; citing *In re Arkley*, 455 F.2d 586, 587 (Fed. Cir. 1972) ("[T]he [prior art] reference must clearly and unequivocally disclose the claimed [invention] or direct those skilled in the art to the [invention] without *any* need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference.")).

As this Board has recently admonished, "[t]he Federal Circuit has expressly warned against treating patent 'claims as mere catalogs of separate parts" without regard for the "part-to-part relationships set forth therein." *Athena Automation Ltd. v. Husky Injection*

Molding Systems Ltd., Case IPR2013-00290, Paper 45, p. 31 (PTAB Oct. 23, 2014)

(quoting *NetMoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1370 (Fed. Cir. 2008)).

The magnitude of the failings of the combination of implementation and systems is

also evident by understanding the different ways of storing and processing the image data.

For example, addressing how the different ways of **storing** and **post processing** the image

data in fact make very different systems was explained to the District Court by Petitioner

admitting

> [a] stored image could be an image that is captured with the camera, and that
> is a stored image and that is a recorded image, but – if you take that same
> image and add to it information about where you got that image from and now
> put it in a database saying, okay, this image goes to this street address and
> belongs here, that is a stored image but not a recorded image because there
> is a lot of processing that happens after recording to alter the image.

Ex. 2003, *Vederi*, Doc. 62, 102: 9-19.

Here, Dr. Fuchs has done nothing more than cite to different embodiments described

in Di Bernardo in another weak attempt to reach the conclusion that a POSITA "would have

recognized that Di Bernardo's **post-processing system 38 converts** the street-level video

data to post processed video data corresponding to a desired image format, and transfers

the post processed video data via post-processing network to the communications network

in response to the query." Ex. 1001, para. 74 (emphasis added). Dr. Fuchs' conclusion is

incorrect because, amongst the other failings, nowhere does the Petition provide any

reasoning as to why a combination that was actually taught away from by Di Bernardo would be proper and operable. In fact, Dr. Fuchs cannot support a proper combination as a proper combination would require acknowledging aspects that were first realized by the '181 patent, including for example the use of parcel line data and calculation of a centroid, which are neither in Di Bernardo nor in any of the prior art of record. Therefore, it is respectfully submitted that Petitioner did not establish a reasonable likelihood that the pertinent claims were unpatentable as being anticipated by Di Bernardo under 35 U.S.C. § 102. *See, e.g., Printing Indus. of America v. CTP Innovations, LLC*, IPR2013-00474, Paper 16, pp. 11-12 (PTAB Dec. 31, 2013) (citing *Net MoneyIN, Inc. v. Verisign, Inc.*, 545 F.3d 1359 (Fed. Cir. 2008)) (denying institution of an anticipation ground which involved combining teachings from two distinct embodiments in the prior art).

Therefore, it is respectfully submitted that Petitioner did not establish a reasonable likelihood that independent Claim 1 and its dependent claims are unpatentable as being anticipated by or rendered obvious over Di Bernardo under Petitioner's Grounds 1-3.

C. [RE: GROUNDS 4-5] Kawabe does not cure the deficiencies of Di Bernardo and Di Bernardo teaches away from combination with Kawabe

Like Di Bernardo, nowhere in Kawabe is there any teaching or suggestion of identifying street view images for "a geographic location of interest." As such, combination with Kawabe does not cure the deficiencies of Di Bernardo to render the claims obvious. Because the Petition does not suggest this missing limitation would be obvious or is taught by any of the other relied upon references (Pet. 26-30), this reason by itself is sufficient for

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the Board to deny the petition. *See Iron Dome LLC v. Chinook Licensing DE LLC*, IPR2014-00674, Paper No. 10, pp. 9-10 (PTAB Oct. 10, 2014) (denying petition where Petition did "not rely on [other cited art] to teach" limitation missing in primary reference).

Moreover, a combination with Kawabe would be contrary to the teachings of Di Bernardo which explicitly teach away from adding any additional computational processing, as Dr. Grindon, argued in litigation regarding Di Bernardo. As recognized by Petitioner's own expert, Di Bernardo teaches to avoid "computational overhead" and to accept a good enough image and good enough location. Ex. 2002, 11:22-12:5, 7:25-8:6. Thus, a POSITA would have been taught away from combining Di Bernardo with Kawabe whose additional video processing (Ex. 1005, para. 38) would add to computational overhead for Di Bernardo. *See In re Gurley*, 27 F.3d at 553 ("[A] reference will teach away if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the applicant.").

For at least the foregoing reasons, it is respectfully submitted that the Petition **fails to demonstrate** a reasonable likelihood that independent Claim 1 and its dependent claims are unpatentable as obvious over Di Bernardo and in view of Kawabe under Petitioner's Grounds 4-5.

D. **[RE: GROUNDS 3-5] The Petition fails to meet the burden required by the PTAB for at least the following common reasons**

(i) **The Petition fails to include claim charts for Grounds 3-5**

Petitioner has failed to make a meaningful obviousness analysis under 35 U.S.C. § 103 with respect to Grounds 3-5 by omitting appropriate claim charts. As such, the petition fails to "specify where each element of the claim is found in the prior art patents or printed publications relied upon" as required by 37 C.F.R. § 42.104(b)(4). Accordingly, Petitioner provided no sufficient explanations as to how the identified disclosures relate or correspond to each claim limitation and no meaningful rationale for the Board to properly evaluate the argued Grounds 3-5. In the absence of claim charts, Petitioner conflates different grounds without providing a clear distinction as to how the identified disclosures are applied to the individual grounds or how the descriptions operate to achieve the claimed invention.

For at least this additional reason, the Board is respectfully requested to reject Petitioner's analysis under Grounds 3-5 and deny these Grounds. 35 U.S.C. § 312(a)(3); 37 C.F.R. § 42.104(b)(4).

(ii) **The Petition fails to identify with particularity the differences between the claimed invention and the prior art**

In proposed Ground 2, Petitioner argues that "to the extent [claims 1, 3-7, and 9-11] are interpreted narrower than Patent Owner's asserted positions . . . such that any limitations are considered not to be anticipated by Di Bernardo alone, such limitations are also rendered obvious by Di Bernardo, as a POSITA would have found such limitations

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obvious in Di Bernardo's disclosure in light of the ordinary knowledge of the POSITA and the state of the art known before August 2004." [*See*, Pet.26 para. 1. This conclusory statement provides no support and thus Ground 2 must also fail because (1) even if claims are interpreted more narrowly than **argued** by Petitioner, Dr. Fuchs Expert Declaration is contradicted by Petitioner's own admissions as to how a POSITA would understand from the descriptions in Di Bernardo, and (2) the Petitioner has not articulated any differences between the claimed invention and Di Bernardo.

Petitioner further argues that if anticipation fails, because the claims are interpreted more narrowly, then the references render the claimed inventions obvious in view of the references cited fails in all respects. First, it fails to comply with the 37 C.F.R. § 42.104(b)(4) requirements providing that the Petitioner must include an explanation of how the construed claim is unpatentable under the asserted statutory grounds. Further, the anticipation conclusions fail, amongst other reasons, because the required structures and elements described by the claimed invention are neither included in the descriptions of the references cited nor operate in the same manner. Consequently, any combination reference combined with Di Bernardo to argue obviousness also fails because Di Bernardo designed to reduce the computational burden, as admitted by Petitioner, is fundamentally different to aspects of the claimed invention.

In regards to the second reason, Petitioner has not articulated any difference between the claimed invention and Di Bernardo for at least independent Claim 1. Without

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having specifically identified the differences between the claimed invention and the prior art, Petitioner has failed to make a meaningful obviousness analysis under 35 U.S.C. § 103, and thus has failed to make a threshold showing of a reasonable likelihood that independent Claim 1 is unpatentable over Di Bernardo, or over Di Bernardo in view of Kawabe.

Without Petitioner having specifically identified the differences, Petitioner's Grounds 3-5 are fatally defective because they failed to present any rationale for modifying Di Bernardo. *See, e.g., Ariosa Diagnostics v. Verinata Health, Inc.*, Case IPR2013-00276, Paper No. 43, pp. 16-17 (PTAB Oct. 23, 2014) ("What is lacking in the Petition and accompanying Declarations is an 'articulated reason[] with some rational underpinning to support the legal conclusion of obviousness.'" (quoting *In re Kahn*, 441, F.3d 977, 988 (Fed. Cir. 2006))). Because Petitioner has also failed to demonstrate a reasonable likelihood that it would prevail with the third ground with respect to at least independent Claim 1, Grounds 2-5 fail as to all of the remaining challenged claims since they all depend on Claim 1.

(iii) **Petitioner's own expert recognizes that Di Bernardo Teaches Against Using Computationally Intensive Techniques.**

Di Bernardo discloses two alternative embodiments to minimize the computations associated with processing the images collected. The first embodiment (Ex. 1005, Di Bernardo, paras. [0036]-[0037], Fig. 1) and the second embodiment (*id.*, para. [0038], Fig. 2) are incompatible with each other and as such, Di Bernardo *teaches away* from the combination of these two embodiments.

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Indeed, Petitioner's expert in litigation over the Di Bernardo patent recognizes this incompatibility. Ex. 2002, Declaration of Dr. Grindon, 11:3-12:5. Specifically, Petitioner's expert admits that one of Di Bernardo's alternative embodiments eliminates the processing system present in the other embodiment to "minimize [the] computational burden" and "to improve upon the so-called 'computationally intensive' and 'cumbersome' methods of forming composite images in the prior art." Ex. 2002 at 11:19-20, 12:1-4.

In view of the foregoing, Petitioner's arguments and Dr. Fuchs' declaration based on the improper combination of the incompatible embodiments of Di Bernardo are inherently defective and should be rejected.

E. [RE: GROUNDS 1-5 (Dependent Claims)] Because Claims 3-7, 8 and 9-11 are Dependent on Claim 1, these claims suffer at least the same defects as Claim 1

The remaining challenged claims, Claims 3-7, 8 and 9-11, are all directly or indirectly dependent upon Claim 1, and thus includes all of the limitations of the system of Claim 1 demonstrated to be absent in Di Bernardo as the primary reference. Neither Kawabe nor Lachinski corrects Di Bernardo's deficiencies. Accordingly, these challenges to Claims 3-7, 8 and 9-11 fail by extension. *See, e.g., CallCopy, Inc. v. Verint Americas, Inc.,* IPR2013-00492, Paper 14, p.7, para. 2 (PTAB Feb. 5, 2014) (holding "[b]ecause the grounds asserted against the dependent claims suffer from the defects of the grounds asserted against the independent claims, [the Board] need[ed] to address only the grounds asserted against independent claims . . . ."). Based on at least the foregoing reason, the Petitioner

fails to demonstrate a reasonable likelihood that dependent Claims 3-7, 8 and 9-11 are unpatentable under Petitioner's Grounds 1-5.

While not necessary for the purpose of deciding this Petition, Patent Owner identifies the following additional teachings missing from the cited art with respect to the remaining dependent claims as follows:

(i) Dependent Claim 3

[3.P] 3. A system as claimed in claim 1, further comprising a map server that presents a static image of an overhead view of the geographic location of **[3.1]** interest.

    a. Di Bernardo does not disclose *a map server that presents a static image of an overhead view of the geographic location of interest*

In addition, as it relates to Claim 3 in Ground 1 argued by the Petitioner, Di Bernardo further fails to anticipate Claim 3 under 35 U.S.C. § 102 because it fails to disclose [3.1] a map server *presenting a static image of an overhead view of the geographic location of interest.* With respect to the analysis of Claim 3, para.75 of Dr. Fuchs' Expert Declaration, concludes that Di Bernardo "discloses a map server that presents a static image of an overhead view of the geographic location of interest." In support, however, he acknowledges that the "'geographic information database 128' that is configured to present 'a map of the city where **the endpoints of each street segment** on the map are **identified by latitude and longitude** information.'" (citing Ex. 1005, Di Bernardo at para. 61) (emphasis added). Regardless of whether the map "includes a street name and **number**

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range for each **street segment** on the map," the image cannot be **accurately centered** on the geographic location of interest, as it related to a subject property at **an address or a parcel**, for the reasons presented above.

Although para. 84 of Di Bernardo, as pointed out by Dr. Fuchs, describes that "[t]he map is preferably centered around the requested address and includes a current location cursor 228 placed on a position corresponding to the address [segment]," nowhere in Di Bernardo is there any teaching or suggestion of any systems that allow for an accurate determination of a position via processing that corresponds to the address or parcel. For example, Di Bernardo in para. 76 admits that the contemplated computation using street segments "may not be accurate if, for instance, there is an unusually wide structure on the segment that is erroneously assigned multiple street numbers because it overlaps into the area of the next number assignment." Accordingly, with respect to Grounds 1, 3, and 4 of the Petition, the Petitioner **fails to demonstrate** a reasonable likelihood that dependent Claim 3 is unpatentable over Di Bernardo either by itself or in combination with Kawabe, which does not cure Di Bernardo's above deficiencies.

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(ii) Dependent Claim 4

[4.1] 4. A system as claimed in claim 1, further comprising a video capture system including:

[4.2] a camera array that generates video image data of a neighborhood corresponding to a geographic location;

[4.3] a positioning unit that produces positioning data corresponding to the location of the camera array; and

[4.4] a processing unit that processes the video image data and positioning data to produce the video drive-by data;

[4.5] wherein the processing unit stores the video drive-by data on the portable memory device.

In the claim chart for Claim 4 (Pet. 41-42), Petitioner argues that Di Bernardo's "post-processing computer 28" in the "post-processing system 38" as described in, for example, paras. 36, 37, and 44 of Di Bernardo corresponds to "a processing unit that processes the video image data and positioning data to produce the video drive-by data" [4.4] recited in Claim 4. In other words, Petitioner takes the position that Di Bernardo's description of the "post-processing computer 28" in the "post-processing system 38" teaches processing of video drive-by data for storage. *See also* Ex. 1001, Dr. Fuchs' Declaration, para. 79.

It is quite telling that Petitioner relies on the exact same description of Di Bernardo's "post-processing computer 28" in the "post-processing system 38" to argue that Di Bernardo teaches yet another claim element [1.5], namely "the image processing server converts the video drive-by data to post processed video data corresponding to a desired image format.

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Compare Petition, Claim Chart for Claim Element [4.4], pp. 41-42, *with id.*, p. 19 and Claim

Chart for Claim Element [1.5], pp. 35-36; *compare also* Ex. 1001, para. 79, *with id.*, para.

74. Moreover, the computer 34 stores in a database 36 the position data from the GPS

receiver 16 and/or inertial navigation system 20 to be used by the post processing system

38 to create the composite images. Ex. 1005, para. 36. Dr. Grindon acknowledges that Di

Bernardo *teaches only a single* "way of generating composite images [which] suffers from a

distortion problem because it requires moving the camera along a path, i.e., along a

trajectory, taking pictures along the way, each picture taken at a different position of the

camera." Ex. 2002, para. 41. "This method, in general, suffers from attempting to combine

images from different positions, which produce different perspective views." *Id.* "Thus, the

method of generating composite images by combining images taken from different

positions, such as taught in the patents [*Di Bernardo*], has limited use in practice, primarily

for flat or nearly flat surfaces, such as for document scanning." *Id.* Clearly, the so called

post-processing computer 28 does not implement parcel data to calculate a more accurate

location for the generating of a composite image. Petitioner's arguments with respect to

Claim Element [1.5] and Claim Element [4.4] contradict with each other.

The inconsistency between Petitioner's arguments with respect to Claims 1 and 4 as

discussed above provides all the more reason why Petitioner's (and likewise Dr. Fuchs')

analyses of Di Bernardo set forth in the petition are flawed and should be rejected.

(iii) Dependent Claim 5

5. A system as claimed in claim 4, wherein the camera array includes a plurality

[5] of camera units arranged to provide a 360 degree view of the neighborhood.

a. Di Bernardo does not anticipate a plurality of camera units arranged to provide a 360 degree view of the neighborhood

In addition, as it relates to Claim 5 in Grounds 1, 3 and 4 argued by the Petitioner, Di Bernardo further fails to invalidate Claim 5 because it fails to disclose [5] *a plurality of camera units arranged to provide a 360-degree view of the neighborhood.* With respect to the analysis of Claim 5, para. 82 of *Dr. Fuchs' Expert Declaration*, again concludes that Di Bernardo discloses this limitation citing para.40.

Petitioner, however, previously argued to the Court in *Vederi* that Di Bernardo's system does not provide a computationally intensive 360-degree view of the neighborhood. *See, e.g.*, Ex. 2003, 117:22-118:9. Here again, as Petitioner's prior sworn admissions confirm, the teachings of the '181 Patent mean something different than what was described by Dr. Fuchs' Expert Declaration and relied in the Petition. Accordingly, with respect to Grounds 1, 3 and 4 of the Petition, the Petitioner **fails to demonstrate** a reasonable likelihood that dependent Claim 5 is unpatentable over Di Bernardo either by itself or in combination with Kawabe, which does not cure Di Bernardo's above deficiencies.

(iv) Dependent Claim 6

6.   A system as claimed in claim 4, wherein the processing until further

[6] provides time stamp data and file pointer data that permits synchronization of video images to precise locations of individual frames.

a. Di Bernardo does not anticipate *file pointer data that permits synchronization of video images to precise location of individual frames*

Di Bernardo further fails to anticipate or render obvious Claim 6 because it fails to

disclose [6] *time stamp data that permits synchronization of video images to precise location*

of individual frames. With respect to the analysis of Claim 6, the Petition continues to rely

on inadequate analysis of Dr. Fuchs as his conclusion is supported by only by comparing

the descriptions of two different, mutually exclusive embodiments described in the cited

paras. 46, 69-70 of Di Bernardo. Not only do the cited portions fail to disclose, *inter alia*, the

file pointer data for the synchronization of video images to **precise** *locations* as disclosed

in the '181 Patent in the description of Figs. 8-9, but Dr. Fuchs' comparison also fails, once

again, for improperly conflated two alternative, mutually-exclusive embodiments (paras. 69-

70 of Ex. 1005, Di Bernardo being the description of an **alternative embodiment** for

identifying and retrieving a column of RGB pixel values for a particular video time) and

failing to provide any support as to why or how a POSITA would be able to combine these

mutually exclusive embodiments to achieve the claimed limitation. Therefore, with respect

to Grounds 1, 3 and 4 of the Petition, the Petitioner **fails to demonstrate** a reasonable

likelihood that dependent Claim 6 is unpatentable over Di Bernardo either by itself or in combination with Kawabe, which does not cure Di Bernardo's above deficiencies.

(v)   Dependent Claim 7

[7]
> 7.   A system as claimed in claim 1, further comprising means for providing a variety of geo-coded data layers in conjunction with the video drive-by data.

a. *Di Bernardo* does not disclose or suggest *a means for providing a variety of geo-coded data layers in conjunction with the video drive-by data*

Petitioner argues that the claim is indefinite under §112, sixth paragraph. However, for the anticipation analysis, para. 21 of Dr. Fuchs' Expert Declaration provides that this means-for limitation includes, *inter alia*, the functions of superimposing text data over video, and displaying parcel data or property lines associated with the geographic location. This analysis contradicts Petitioner's argument that the claim is indefinite under § 112, sixth paragraph, and supports Patent Owner's proposed construction for geographic location of interest by the way "parcel data or property lines" are associated with a "property on the geographic location." In any event, under 35 U.S.C. § 311(b), Petitioner cannot raise a ground of indefiniteness under 35 U.S.C. § 112 to challenge a patent claim in the petition for inter partes review.

Further, Dr. Fuchs' analysis only cites portions of Di Bernardo that cite to superimposing icons with information but nothing that teaches or suggests using **geo-coded layers with parcels or property lines** associated with the **subject property of the**

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particular location. Accordingly, with respect to Grounds 1, 3 and 4 of the Petition, the

Petitioner **fails to demonstrate** a reasonable likelihood that dependent Claim 7 is

unpatentable over Di Bernardo by itself or in combination with Kawabe, which does not cure

Di Bernardo's above deficiencies.

(vi)   Dependent Claim 10

[10]   10. A system as claimed in claim 9, further comprising means for calculating a camera position of designated individual frames of video by using position data points captured before and after a designated frame position.

a. Di Bernardo does not disclose or suggest *means for calculating a camera position of designated individual frames of video by using portions of data captured before and after a designated frame position*

Petitioner argues that the claim is indefinite under § 112, sixth paragraph. As noted

above, under 35 U.S.C. § 311(b), Petitioner cannot raise a ground of indefiniteness under

35 U.S.C. § 112 to challenge a patent claim in the petition for *inter partes* review.

For the anticipation analysis, paras. 90-91 of Dr. Fuchs' Expert Declaration picks and

chooses different portions of the mutually exclusive embodiments described in Di Bernardo

to argue that this limitation is anticipated. In particular, Dr. Fuchs begins citing paras.42-43

of Di Bernardo relating to systems to gather camera position during image capture with

paras. 67-70 describing the identification and retrieval columns of RGB pixel values for a

particular video time. Dr. Fuchs acknowledges that the GPS position information is not

adequate in terms of precision and acceleration information needs to be taken into account

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to determine camera position. Nevertheless, without any reasoning or explanation other than directing the Board to para. 43 of Di Bernardo, Dr. Fuchs concludes that the computer 34 anticipates the claimed limitation. This conclusion is not enough to demonstrate a reasonable likelihood that the claim is unpatentable.

As previously explained, however, Petitioner's own expert in litigation admitted that the computer 34's post-processing is eliminated in an alternative embodiment and that method of calculating camera position assumes that the camera is traveling in a straight path. Ex. 2002, Dr. Grindon's Declaration, para. 38. Thus, it would not be adequate without further steps that vary depending on the system. Accordingly, with respect to Grounds 1, 3, and 4 of the Petition, the Petitioner **fails to demonstrate** a reasonable likelihood that dependent Claim 10 is unpatentable over Di Bernardo either by itself or in combination with Kawabe, which does not cure Di Bernardo's above deficiencies.

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(vii) Dependent Claim 11

[11]

> 11. A system as claimed in claim 10, wherein the position data points are used to create the parameters of a polynomial function which represents the spline path of movement by a vehicle in which the camera array is mounted, wherein this polynomial function can be used to calculate the position and camera orientation based on a smooth curve versus a straight point to point straight line segment for each frame captured between the position data transmission intervals.

a. Di Bernardo does not anticipate the use of a polynomial function to calculate a camera position and orientation

It is of upmost importance to calculate both accurate camera orientation and position to achieve the perspective views--toward a geographic location of interest--as taught by the '181 Patent. Dr. Fuchs cites paras. 56-59 of Di Bernardo to argue that the limitation is anticipated. However, the cited paragraphs describe a way to identify the ends of straight image segments with intersections. Even if argued that the respective paragraphs, with additional teachings, can be used to calculate a camera position, neither Dr. Fuchs nor the cited paragraphs mention camera orientation and thus the conclusions by Dr. Fuchs are both unsupported and incorrect. Accordingly, with respect to Grounds 1, 3, and 4 of the Petition, the Petitioner **fails to demonstrate** a reasonable likelihood that dependent Claim 11 is unpatentable over Di Bernardo either by itself or in combination with Kawabe, which does not cure Di Bernardo's above deficiencies.

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F. [RE: GROUND 2] Claim 8 is Patentable over Di Bernardo in view of Lachinski under 35 U.S.C. § 103

(i)   Overview of Lachinski

Lachinski describes a method for collecting and processing video and spatial position information for the formation of a geographic information database. Ex. 1006, 2:10-13. More particularly, the cited portions describe method steps that can be used to determine centerline of a street using a computer-aided design display system.

(ii)   Claim 8

8. A system as claimed in claim 1, further comprising means for creating geo-coded text, image and vector data which is superimposed onto the post processed video data that is transferred to the communications network.

a. Di Bernardo in view of Lachinski fails to render obvious a means for *creating* geo-coded text, image and vector data which is superimposed onto the post processed video data that is transferred to the communications network

The combination of Di Bernardo and Lachinski to argue obviousness fails at least because of the different problems-Di Bernardo and Lachinski are meant to solve. In other words, there would have been no reason why a POSITA would have combined Di Bernardo and Lachinski.

More importantly, as discussed above, the required structures and elements (e.g., *inter alia*, MENCODER, GDAL, OpenGL, GraphicsMagick, FFMPEG) described by the claimed systems are neither included in the portions of the descriptions cited in Lachinski nor do the embodiments of the references operate in the same manner. The proposed

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limitations included in the proposed construction by the Patent Owner for the means for system in this claim are also not found in the sections cited by Petitioner.

Petitioner's reliance on the combination of Lachinski with Di Bernardo to argue obviousness also fails because Di Bernardo, which is designed to reduce the computational burden, as admitted by Petitioner's other expert (Ex. 2002, para. 39), does not teach but rather teaches away from the processing of **subject property parcel boundaries** making it fundamentally different than the claimed invention.

Accordingly, with respect to Ground 2 of the Petition, the Petitioner **fails to demonstrate** a reasonable likelihood that dependent Claim 8 is unpatentable over Di Bernardo and in view of Lachinski under 35 U.S.C. § 103.

G. **[RE: GROUND 5] Claim 8 is Patentable over Di Bernardo in view of Kawabe and Lachinski under 35 U.S.C. § 103.**

(i)   Overview of Kawabe

Kawabe describes a graphic distribution system and method steps for distributing images captured by a monitoring camera. Ex. 1008. Petitioner argues that Kawabe presents a compatible distribution system that can be combined with the teachings of Di Bernardo and Lachinski. Petitioner's argument is wrong as discussed herein.

(ii)   Claim 8

8. A system as claimed in claim 1, further comprising

means for creating geo-coded text, image and vector data which is superimposed onto the post processed video data that is transferred to the communications network.

a. Di Bernardo in view of Lachinski *and* Kawabe fail to render obvious a means for *creating* geo-coded text, image and vector data which is superimposed onto the post processed video data that is transferred to the communications network

The combination of Di Bernardo (Ex. 1005), Lachinski (Ex. 1006) and Kawabe (Ex. 1008) to argue obviousness fails because of the different problems all of the references cited are respectively designed to solve. There would have been no reason why a POSITA would have combined Di Bernardo, Lachinski and Kawabe.

More importantly, as discussed above, the required structures and elements described by the claimed systems are neither included in the portions of the descriptions cited nor do the embodiments of the references operate in the same manner.

First, the deficiencies of Di Bernardo, which are discussed above in connection with Claim 1, are not corrected by either Lachinski or Kawabe. Neither reference adapts video drive-by data generated at geographic locations of interest nor describes the post-processing to property parcel boundaries as taught by the '181 Patent and required by the Claims.

Moreover, the proposed limitations included in the proposed construction by the Patent Owner for the means for system in this claim are not found in the sections cited by Petitioner.

In addition, Petitioner's reliance on the combination of Lachinski and Kawabe with Di Bernardo to argue obviousness also fails because Di Bernardo, which is designed to reduce the computational burden, as admitted by Petitioner's other expert (Ex. 2002, para. 39), teaches away from combining with the Lachinski and Kawabe systems.

Accordingly, with respect to Ground 5 of the Petition, the Petitioner **fails to demonstrate** a reasonable likelihood that dependent Claim 8 is unpatentable over Di Bernardo and in view of Kawabe and Lachinski under 35 U.S.C. § 103.

5. CONCLUSION

For at least the foregoing reasons, the Board should deny *inter partes* review based on any of the grounds argued by Petitioner challenging Claims 1, and 3-11 and grant any and all other relief to Patent Owner the Board deems just.

Respectfully submitted,

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), the undersigned hereby certifies that on this 30th

day of October, 2014, a copy of the foregoing PATENT OWNER'S PRELIMINARY

RESPONSE TO PETITION FOR INTER PARTES REVIEW OF U.S. PATENT NO.

7,389,181 UNDER 35 U.S.C. §§ 311-319 AND 37 C.F.R. §42 ET SEQ., together with

Patent Owner's Exhibit List and Exhibit Nos. 2001-2003, was served via EXPRESS MAIL®

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