

CAFC Claim Interpretation

CAFC VEDERI, LLC, V. GOOGLE, INC., (March 14, 2014)

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March 26, 2014



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- **United States Court of Appeals
Federal Circuit**
- **VEDERI, LLC, *Plaintiff-Appellant,***
- **V.**
- **GOOGLE, INC., *Defendant-Appellee.***

Background

- Vederi sued Google for patent infringement in 2010, alleging that Google's "*Street View*" infringed various claims of four related patents: U.S. Patent Nos. 7,239,760 ('760 patent); 7,577,316; 7,805,025; and 7,813,596 (the Asserted Patents).
- The Asserted Patents share a common specification and claim priority to a common provisional patent application.

Google View

- White House:

<https://www.google.com/maps/views/explore?gl=us&vm=1&ll=38.897676,-77.03653&z=17>

- Ginza Tokyo:

- <https://www.google.com/maps/views/explore?gl=us&loc=0x60188be701836fbb:0x604685b30ba99851&vm=2&ll=35.670753,139.76947&z=16>

Background- Asserted Patent

- The Asserted Patents relate to methods for creating synthesized images of a geographic area through which a user may then visually navigate via a computer.
- In acquiring the images, a camera(s) is mounted on top of a car that is driven throughout the geographic area.
- In one embodiment, a single camera points generally horizontally and perpendicularly to the axis of the street to capture front views of the objects lining the streets (and sometimes side views of buildings, stores, homes, and other objects).
- The Asserted Patents disclose that multiple cameras may also be used to capture views in different directions.

Background- Asserted Patent

- The camera captures and records images as it passes by objects (e.g., stores, buildings, cars).
- By combining these images of the geographic area, the Asserted Patents disclose generating a composite image that provides a field of view that is wider than that provided by any single image, as shown in Figure 2.

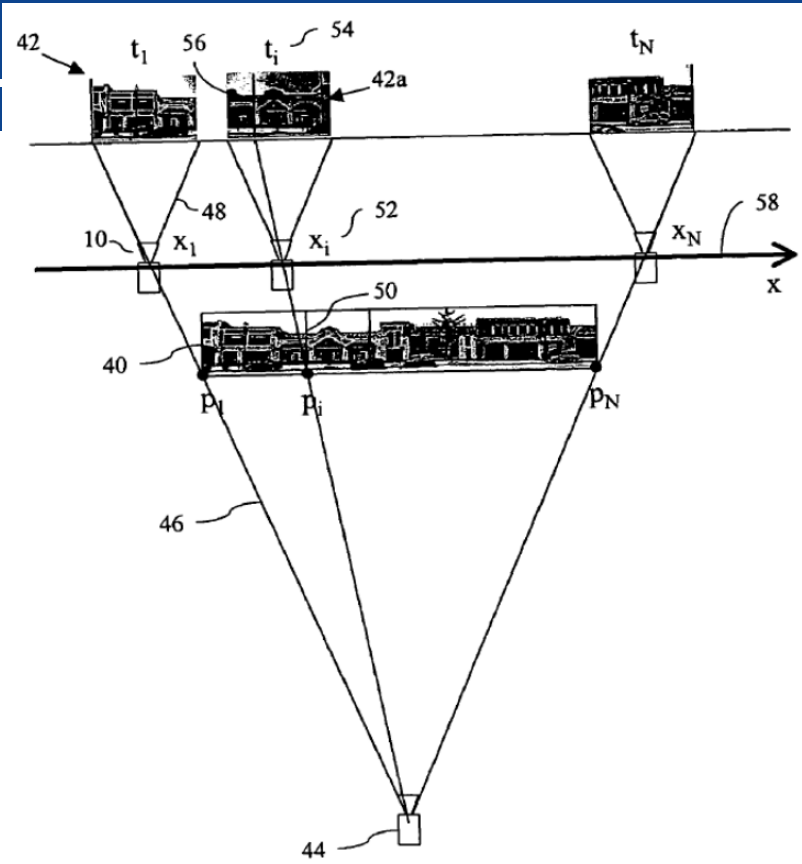
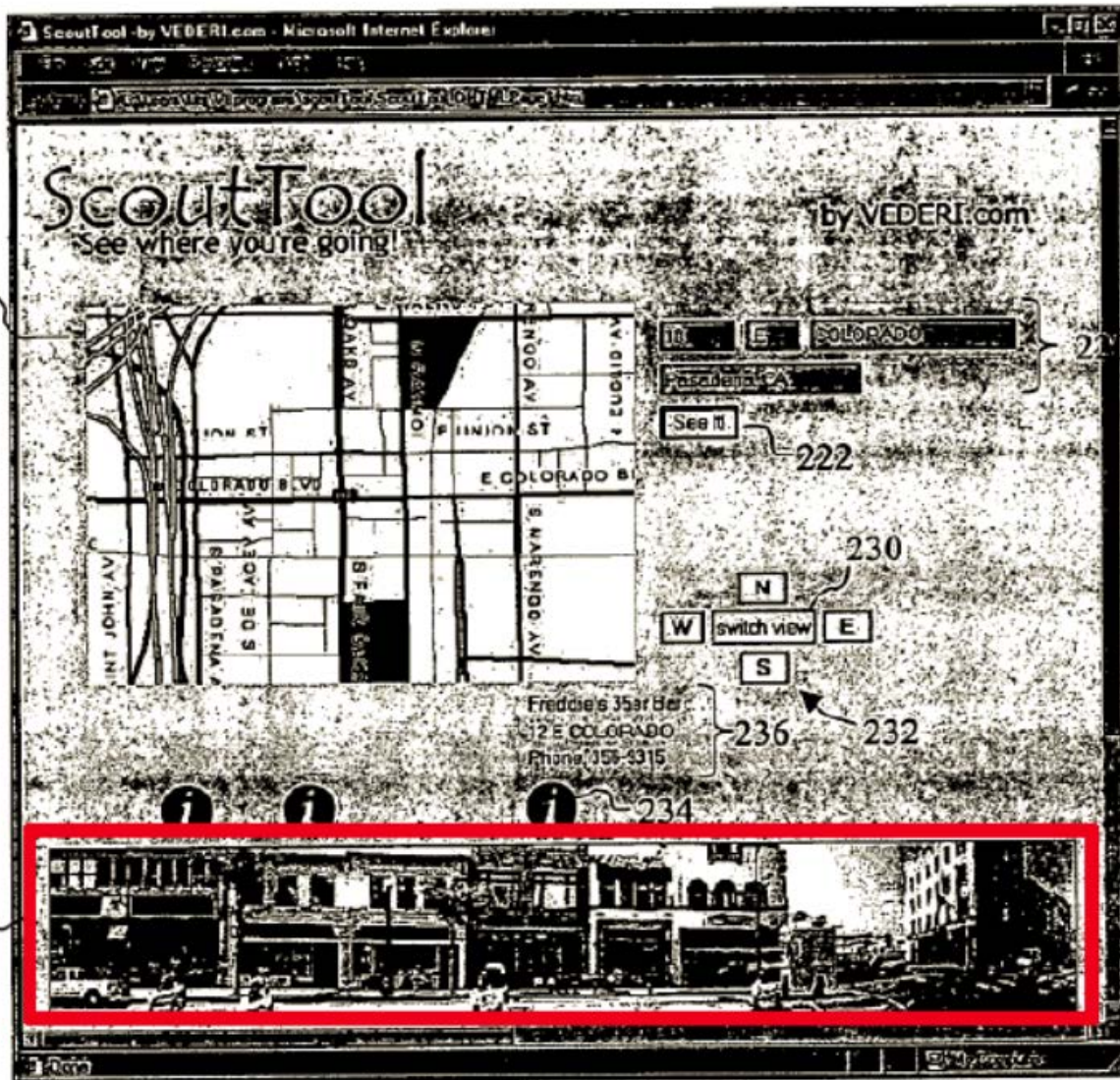


Fig.2

Background- Asserted Patent

- As shown in Figure 2, the camera captures views as the vehicle moves along axis X (58).
- A composite image (40) gives a viewer the perspective of viewing the passing objects from the vantage point of a fictitious camera (44), as shown in Figure 16.



Background- Asserted Patent

- The Asserted Patents note that the cameras may use fish-eye lenses, and provide "fish-eye views of the objects."
- The Asserted Patents incorporate by reference, and claim priority to, U.S. Provisional Application No. 60/238,490, filed on October 6, 2000.

Background- Asserted Patent

- That provisional patent application discloses, in relevant part:
- Future embodiments of the invention could present video/image data in different formats. For example, rather than using a camera facing directly to the street side, a slightly forward (or backward)-looking camera could be used to provide a panoramic look up (or down) the street. Also, if sufficient cameras to cover all viewing directions are used (so as to provide 360 degrees of view) images (and synthetic panoramas) where the direction of view is user-controllable can be provided.

Background- Asserted Patent

- Claim 1 of the '760 patent is representative of the asserted claims. It recites:
- 1. In a system including an image source and a user terminal having a screen and an input device, a method for enabling visual navigation of a geographic area from the user terminal, the method comprising:
- receiving a first user input specifying a first location in the geographic area;
- retrieving from the image source a first image associated with the first location, the image source providing a plurality of **images depicting views of objects in the geographic area, the views being *substantially elevations* of the objects in the geographic area**, wherein the images are associated with image frames acquired by an image recording device moving along a trajectory;
- receiving a second user input specifying a navigation direction relative to the first location in the geographic area;
- determining a second location based on the user specified navigation direction; and retrieving from the image source a second image associated with the second location.

Background- Asserted Patent

- The dispute on appeal concerns the “***substantially elevations***” limitation (in all of the asserted claims).
- The district court concluded that Google did not infringe any asserted claims after construing the term “*images depicting views of objects in a geographic area, the views being substantially elevations of the objects in the geographic area*” as “vertical flat (as opposed to curved or spherical) depictions of front or side views.”
- Thus, under the trial court’s reading of the claims, spherical or curved images fell outside the scope of Vederi’s patent claims.

Google's Street View

- The accused product (Google's Street View) provides context for the parties' disagreement. According to Google, Street View combines images of a wide range of views recorded by multiple cameras having wide-angle lenses mounted on a moving vehicle.
- Those photographs are overlapping pictures taken from a single location at approximately the same time.



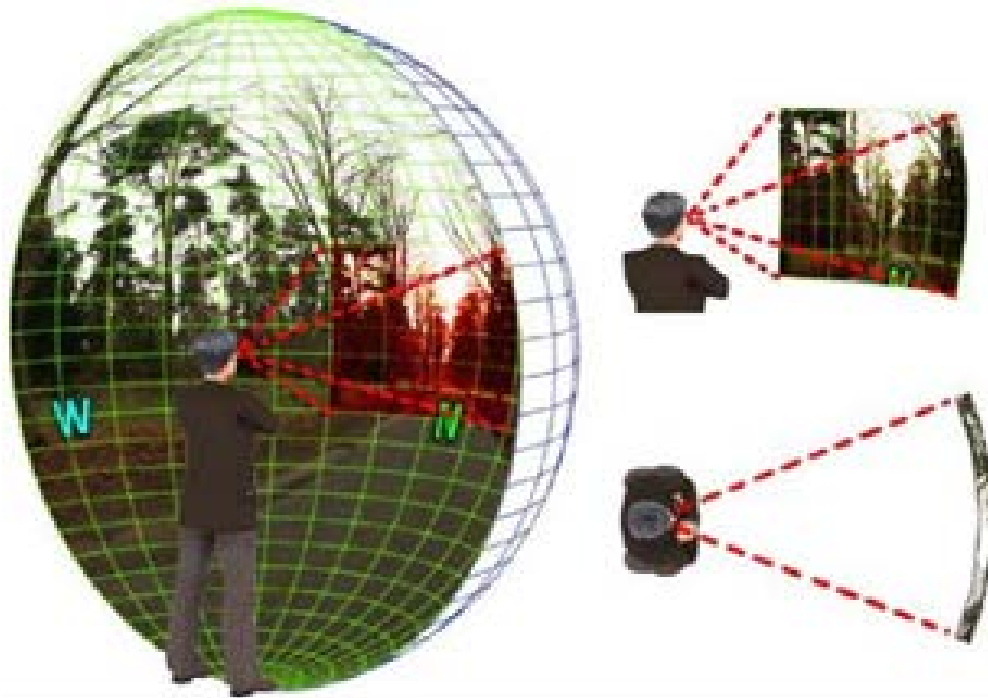
- These images are stitched together into a virtual spherical composite image.
- The resulting image is a two-dimensional representation of a spherical shape.



Google's Street View

- The spherical projections are then cut into square tiles to reduce bandwidth when a user is viewing only a portion of the spherical image.
- The spherical panorama gives the user the option to scroll around and view objects as if the user were standing in the center of the sphere.

Google's Street View



Google's Street View

- According to Google, it does not infringe the Asserted Patents because its product produces images and views that are curved or spherical, and never flat.

District Conclusion

- *Markman* hearing (November 22, 2011).
- Vederi stated that the limitation “depicting views of objects . . . the views being substantially elevations of objects” means “front or side views of objects.”
- Google contended that the limitation means “vertical flat (as opposed to curved or spherical) depictions of front or side views.”
- The district court adopted Google’s construction because it concluded that the Asserted Patents did not “disclose anything about spherical views.”

District Conclusion

- In its opinion on summary judgment, the district court stated that it “adopted Google’s construction of ‘substantially elevations’ because Vederi’s method of taking, processing, and displaying images creates only vertical flat views, not spherical ones.”
- The district court elaborated by noting that the “photographs are captured by cameras moving along a horizontal plane. . . . The result is one long, flat composite picture of a street Nothing about that method or result suggests that the patents cover curved or spherical images.”

District Conclusion

- The district court further observed that the reference to 360 degree panning in the provisional patent application refers to the creation of a 360 degree panorama, akin to “panning 360 degrees along a horizontal plane, not within a sphere.”
- The district court noted that it would be similar to taking pictures with a camera “as it spun around on a Lazy Susan.”
- According to the district court, it would not be possible to pan up and down as in Street View.

District Conclusion

- Based on its claim construction, the district court entered summary judgment of non-infringement in favor of Google.
- The district court noted that “[t]he court’s construction of the ‘substantially elevations’ limitation means that if Street View presents only curved/spherical images, it doesn’t infringe Vederi’s patents because all of Vederi’s patents contain the ‘substantially elevations’ limitations.”

District Conclusion

- After considering the parties' competing arguments, the court explained that
- The district court concluded, “because Street View displays only curved views, it doesn't contain the ‘substantially elevations’ limitation, even if Street View's images “may appear to be flat to the naked eye, but they are actually curved” because of Google's methods for capturing, processing, and displaying them.
- Vederi appeals.

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- Claim construction is an issue of law reviewed de no-vo. *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1456 (Fed. Cir. 1998).
- In construing claims, this court relies primarily on the claim language, the specification, and the prosecution history. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314–17 (Fed. Cir. 2005) (en banc).
- “Apart from the claim language itself, the specification is the single best guide to the meaning of a claim term.” *AIA Eng’g Ltd. v. Magotteaux Int’l S/A*, 657 F.3d 1264, 1272 (Fed. Cir. 2011) (internal quotations and citation omitted).

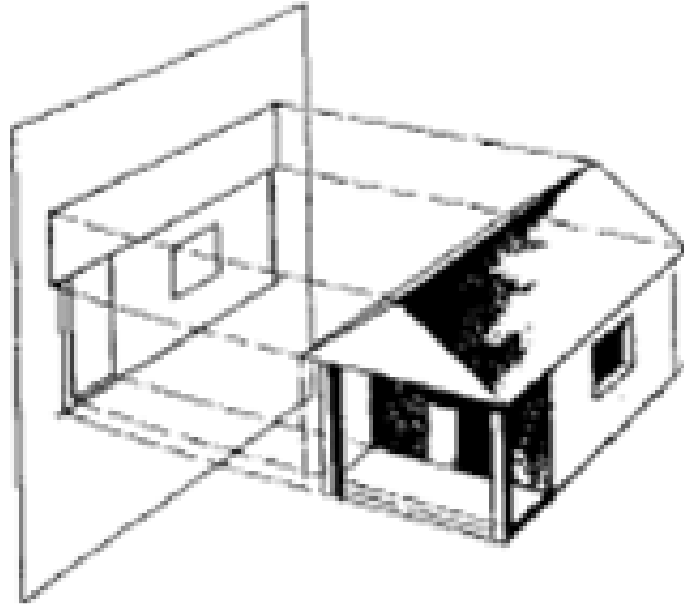
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- While the prosecution history often lacks the clarity of the specification, it is another established source of intrinsic evidence.
- After considering these three sources of intrinsic evidence, a court may also seek guidance from extrinsic evidence. *Phillips*, 415 F.3d at 1317–18. However, extrinsic evidence may be less reliable than the intrinsic evidence. *AIA Eng'g*, 657 F.3d at 1273.

- In the present case, the district court construed “images depicting views of objects in a geographic area, the views being substantially elevations of the objects in the geographic area” as “vertical flat (as opposed to curved or spherical) depictions of front or side views.”
- A careful review of the record shows that the district court erred by excluding all curved or spherical views and images.

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- The district court based its construction of “substantially elevations” largely on extrinsic evidence regarding the technical meaning of “elevation” as an architectural term of art.
- Various technical dictionaries define “elevation” as a projection of a building surface onto a vertical plane or on a plane vertical (at a right angle) to the horizon.
- Indeed, according to Google, elevations are “non-perspective, two-dimensional views depicted as if the viewer were simultaneously positioned at 90 degrees (along the horizontal plane) from every point of the object.”



elevation

- Cyril Harris, American Architecture: An Illustrated Encyclopedia 114 (1998).

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- However, the district court erred in construing “substantially elevations” without sufficiently considering the intrinsic evidence.
- In this case, the claim language is a critical part of the record that shows the error in the trial court’s reading of the claims. The operative language in this case is “*substantially* elevations.”
- The district court’s construction requiring elevation, and “elevation” alone in the strict sense, gives no effect to the “substantially” modifier contained in the claims. “A claim construction that gives meaning to all the terms of the claim is preferred over one that does not do so.” *Merck & Co., Inc. v. Teva Pharm. USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir. 2005).
- By effectively reading “substantially” out the claims, the district court erred.
- The term “substantially” takes on important meaning in light of the rest of the intrinsic evidence in this record.

- For example, the Asserted Patents relate to taking photographs or videos of objects to create images and depict views of a geographic area, not architectural drawings of buildings.
- Additionally, the specification of the Asserted Patents discloses the use of a fish-eye lens, and “fish-eye views.”
- A photographic image through a fish-eye lens provides a curved, as opposed to vertical, projection, and almost certainly reflects curvature and perspective. In other words, the photographic image is not flat and not an elevation.

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- Google argues that the meaning of “substantially” merely reflects the fact that, as a practical matter, photographic images, such as those disclosed in the Asserted Patents, could not depict true elevations as that would require a camera lens as large as the object being photographed (here, buildings, cars, and the like).
- But under this interpretation, “substantially” has no independent operative effect other than to account for the specification’s disclosure of cameras as a means for capturing images.
- This interpretation would not allow the claims to cover the fish-eye lens embodiment.
- Thus, the district court’s confining claim construction does not account for important parts of the intrinsic record.

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- While Google argues that the specification only discloses a method of creating the composite images by combining vertical flat columns that would result in vertical flat images, the specification simply states that “preferably” the composite images are created on a column-by-column basis.
- The specification does not state that this is the only way to create composite images.
- No reason to limit the disputed claim language based on that particular embodiment.

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- The prosecution history also does not support the district court's construction.
- Google contends that the inventors of the Asserted Patents disclaimed the construction sought by Vederi in responding to a rejection over a prior art reference. Specifically, the application leading to the '760 patent initially contained claims reciting “images providing a non-aerial view of the objects.”
- The Patent Office rejected those claims in view of U.S. Patent No. 6,140,943 (Levine). The applicant responded by amending the claims to remove “non-aerial view” and add “substantially elevations.”
- The applicant also correctly noted that Levine was directed to “map images, which may include names of streets, roads, as well as places of interest” that a traveler could use to navigate through a geographic area.

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- Therefore, Levine did not disclose images “depict[ing] views that are ‘substantially elevations of the objects in a geographic area’” or “acquired by an image recording device moving along a trajectory.” *Id.* at 504.
- Despite Google’s protestations to the contrary, this court discerns no clear and unambiguous disavowal of spherical or curved images that would support the district court’s construction. *Invitrogen Corp. v. Biocrest Mfg., L.P.*, 327 F.3d 1364, 1369 (Fed. Cir. 2003).

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- This court concludes that the district court erred in construing “images depicting views of objects in a geographic area, the views being substantially elevations of the objects in the geographic area” as “vertical flat (as opposed to curved or spherical) depictions of front or side views.”
- To the contrary, the record shows that “views being substantially elevations of the objects” refers to “front and side views of the objects.”
- Thus, the claims do not exclude curved or spherical images depicting views that are substantially front or side views of the objects in the geographic area.

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- This court also declines Vederi's request to consider its infringement arguments on appeal without the benefit of the district court's fact-finding under a proper construction of the claims.
- This court reverses the district court's claim construction, vacates its judgment of non-infringement and remands for further proceedings consistent with this opinion.

Conclusion

- Claim interpretation must be based on:
- First, claims;
- Second, intrinsic evidence (spec., file history);
- Third, extrinsic evidence (e.g., dictionary), but less dependable than the above.

- END

- Thank you.