

**Google LLC,
v.
Geoscope Technologies Pte. LTD.**

Patent Owner Demonstratives
IPR2023-01213 (Patent 9,097,784)
November 20, 2024

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DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Geoscope Exhibit 2025
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U.S. Patent No. 9,097,784

D. Asserted Ground of Unpatentability

Petitioner, supported by the declaration of David H. Williams (Ex. 1008), asserts the following ground of unpatentability (Pet. 6):¹

Claims Challenged	35 U.S.C. §	References/Basis
1, 2, 10–13, 21, 22	103(a)	Crane, ² Spain ³

Petitioner contends that all references cited in the ground of unpatentability qualify as prior art under pre-AIA 35 U.S.C. § 102(b). Pet. 7. Patent Owner does not, at this stage of the proceeding, challenge the availability of any of the references as prior art. We presume, for purposes of this decision, that all references relied on by Petitioner are prior art to the '784 patent.

¹ The relevant sections of the Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, took effect on March 16, 2013. The '784 patent claims priority to applications with filing dates before this date. *See* Ex. 1001, code (60), (63). For the purposes of this Decision, pre-AIA statutes apply.

² US 6,381,533 B1, issued April 30, 2002, Ex. 1004 (“Crane”).

³ US 2003/0064735 A1, published April 3, 2003, Ex. 1005 (“Spain”).

IPR2023-01213 DI (Paper 14) at 7

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What is claimed is:

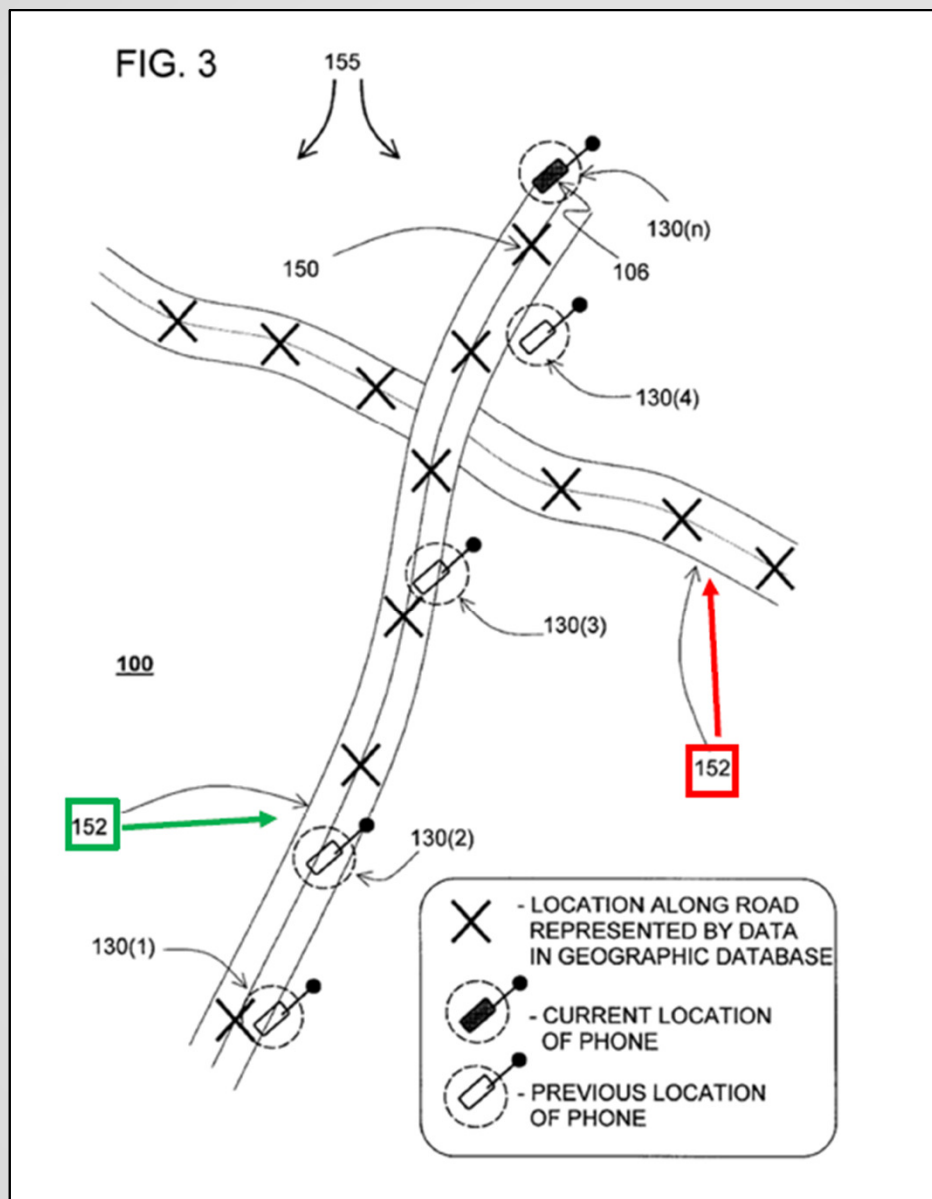
1. A method for generating a calibration database, comprising:
receiving at a wireless device an attribute of a signal transmitted by a wireless transmitter to a mobile station in a region;
wirelessly transmitting from said wireless device said attribute to a controller unit;
obtaining location data of a plurality of geographic locations situated within said region, wherein said location data is determined using said wireless device, and wherein said region contains plural streets and intersections of said plural streets;
providing a location information database wherein said location database includes latitude and longitude information for each of a plurality of points within said region;
determining a status of said wireless device;
determining from said status a most likely one of said plural streets upon which said wireless device is located;
determining said most likely street as a first one of said plural geographic locations;
determining a first point of said plural points that is in proximity to said first geographic location; and
entering said first point in said calibration database and associating the location data for the first one of said plural geographic locations determined by said wireless device with the first point.

Ex. 1001 at 9:16-46 (Claim 1)

12. A system for generating a calibration database, comprising:
a wireless device for determining location data at a plurality of geographic locations situated within a region, wherein said region contains plural streets and intersections of said plural streets, said wireless device receiving an attribute of a signal transmitted by a wireless transmitter to a mobile station in said region;
a wireless device transmitter for transmitting from said wireless device said attribute to a controller unit;
a location information database wherein said location database includes latitude and longitude information for each of a plurality of points within said region;
circuitry for determining a status of said wireless device;
circuitry for determining from said status a most likely one of said plural streets upon which said wireless device is located;
circuitry for determining said most likely street as a first one of said plural geographic locations;
circuitry for determining a first point of said plural points that is in proximity to said first geographic location; and
circuitry for entering said first point in said calibration database; and associating the location data for the first one of said plural geographic locations determined by said wireless device with the first point.

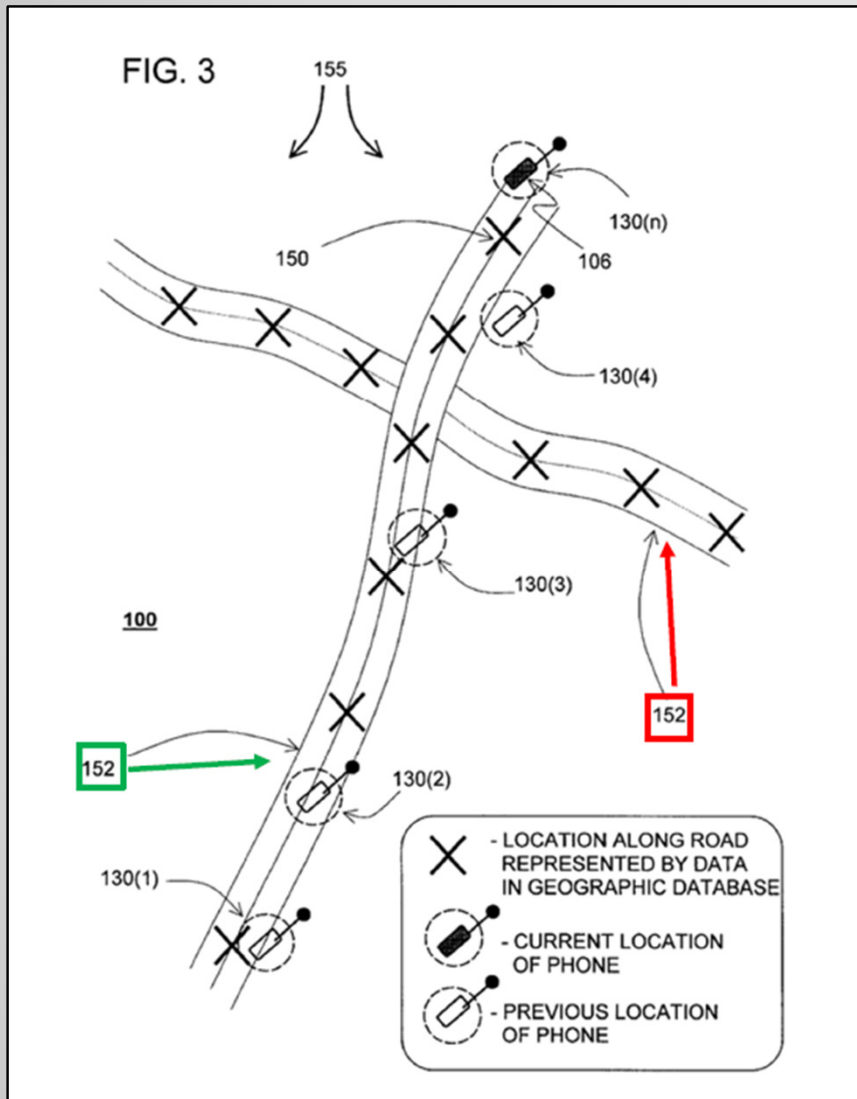
Ex. 1001 at 10:9-33 (Claim 12)

Crane [Ex. 1004]



IPR2023-01213 Por, 3;
Ex. 1004 at FIG. 3 (annotated to show
references to "152")

Crane [Ex. 1004] FIG. 3



Ex. 1004 at FIG. 3 (annotated to show references to “152”);
IPR2023-01213 Por, 3

FIG. 3 shows the depiction of the series of positions 130(1), 130(2) . . . 130(n) of the single cellular phone from FIG. 2. FIG. 3 also shows a plurality of roads 152 that form a road network 155 in the geographic area 100. Referring to FIGS. 3 and 4, the road network 155 is represented by data 170 in a geographic database 172. In FIG. 3, a plurality of points 150 are shown located along the roads 152. The points 150 are positions along each of the roads 152. Each of the points 150 is associated with geographic coordinates that define the location of the point in the geographic area 100. The coordinates may be absolute or relative. The points 150 therefore define the locations of the roads 152 in the geographic area 100. Included among the data 170 are data 174 representing the coordinates of the points along the roads 152 that form the road network 155 represented by the geographic database 172.

Ex. 1004 at col 3:33-48 (annotated to show reference to
“plurality of roads 152” shown in FIG. 3);
IPR2023-01213 Por, 3-4

Crane [Ex. 1004]

SUMMARY OF THE INVENTION

25 To address these and other objectives, the present invention comprises a method and system that matches the positions of one or more cellular phones, or other types of wireless phones, to data indicating the locations of roads in a geographic area to derive data about phones located in
30 vehicles traveling along the roads. The data about phones located in vehicles traveling along the roads are used for updating or refining a geographic database, traffic monitoring and/or reporting, or for other purposes.

Ex. 1004 at 2:23-34;
IPR2023-01213 Sur-Reply, 1-2

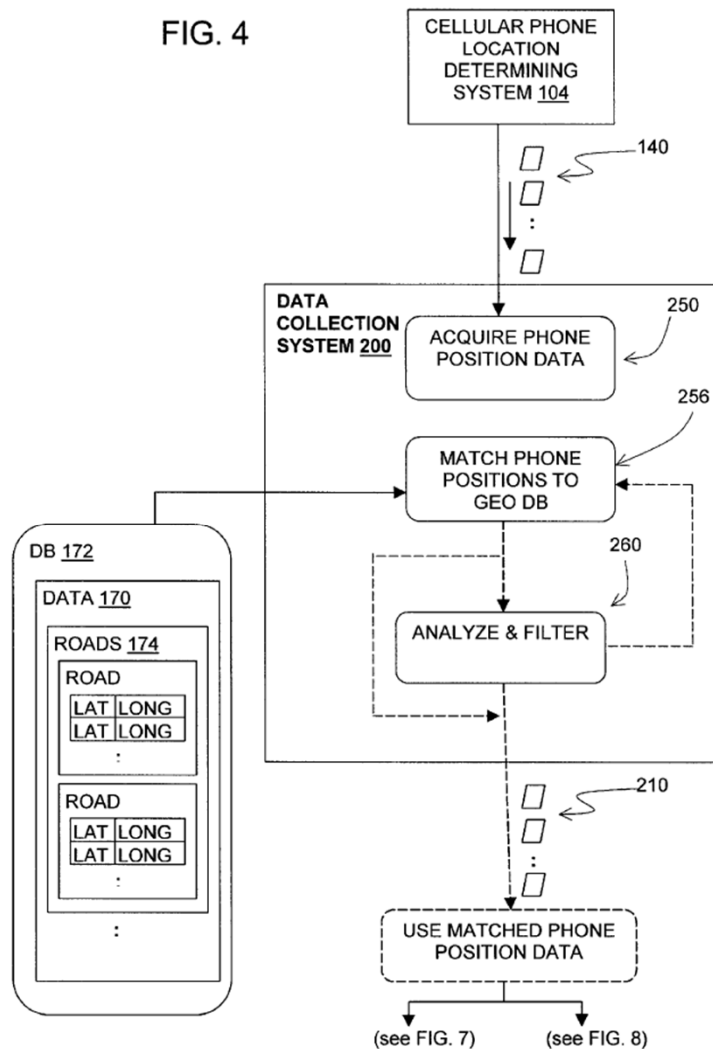
Crane [Ex. 1004]

The matching process 256 optionally includes other processes 260 that perform analysis and filtration of the data 140. The analysis and filtration processes 260 may make use of several assumptions and/or observations. For example, if
5 the acquired cellular position data 140 indicate that the cellular phone is on or within a certain threshold distance of the position of a road 152 or is moving, the cellular phone can be assumed to be inside of a vehicle traveling along the road. This is illustrated in connection with FIG. 5. In FIG.
10 5, straight dashed lines 266 are shown connecting the points 150 that are located along the actual roads (152 shown in FIG. 3) and for which data (174 in FIG. 4) are included in the geographic database to represent the positions of the roads. The straight dashed lines 266 in FIG. 5 approximate the actual paths of the roads represented by the points 150.

Ex. 1004 at 4:1-14;
IPR2023-01213 Por, 3

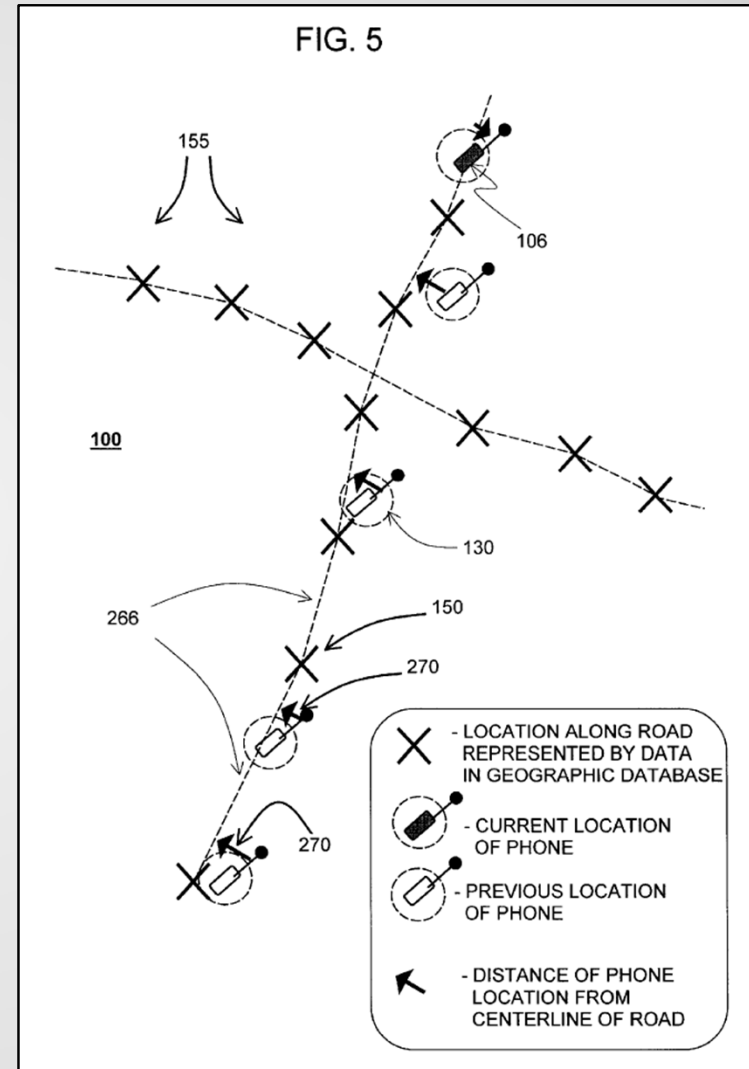
Crane [Ex. 1004] FIGs. 4, 5

FIG. 4



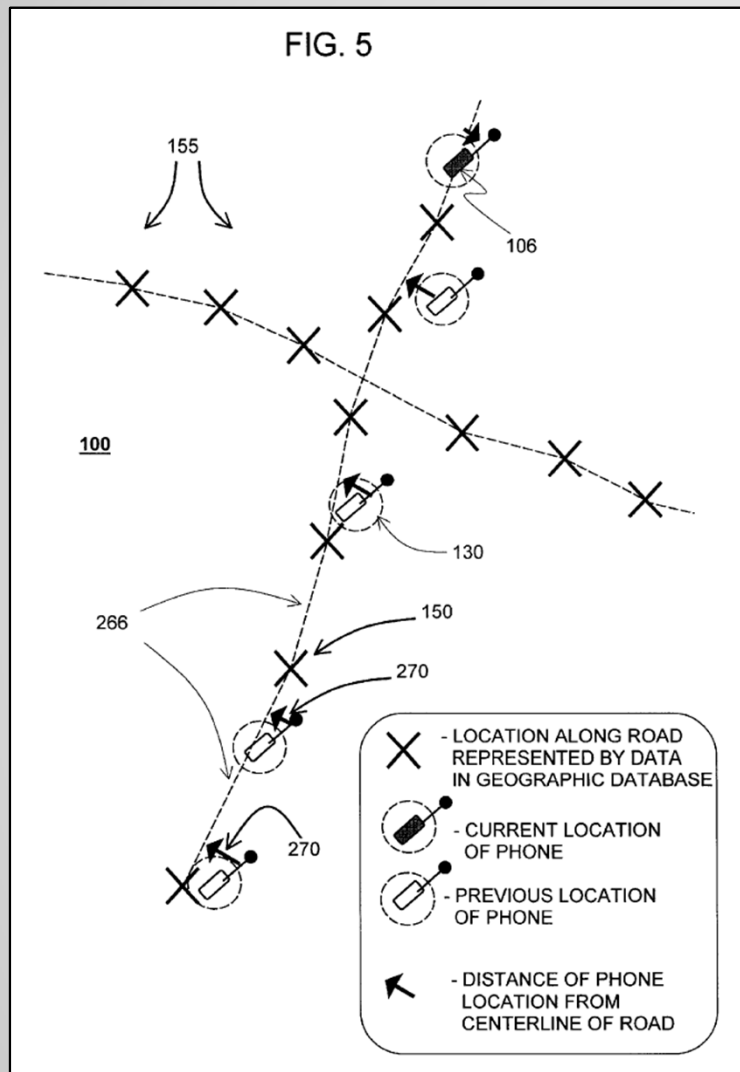
Ex. 1004 at FIG. 4;
IPR2023-01213 Sur-Reply, 2-3

FIG. 5



Ex. 1004 at FIG. 5;
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Crane [Ex. 1004] FIG. 5



Ex. 1004 at FIG. 5;

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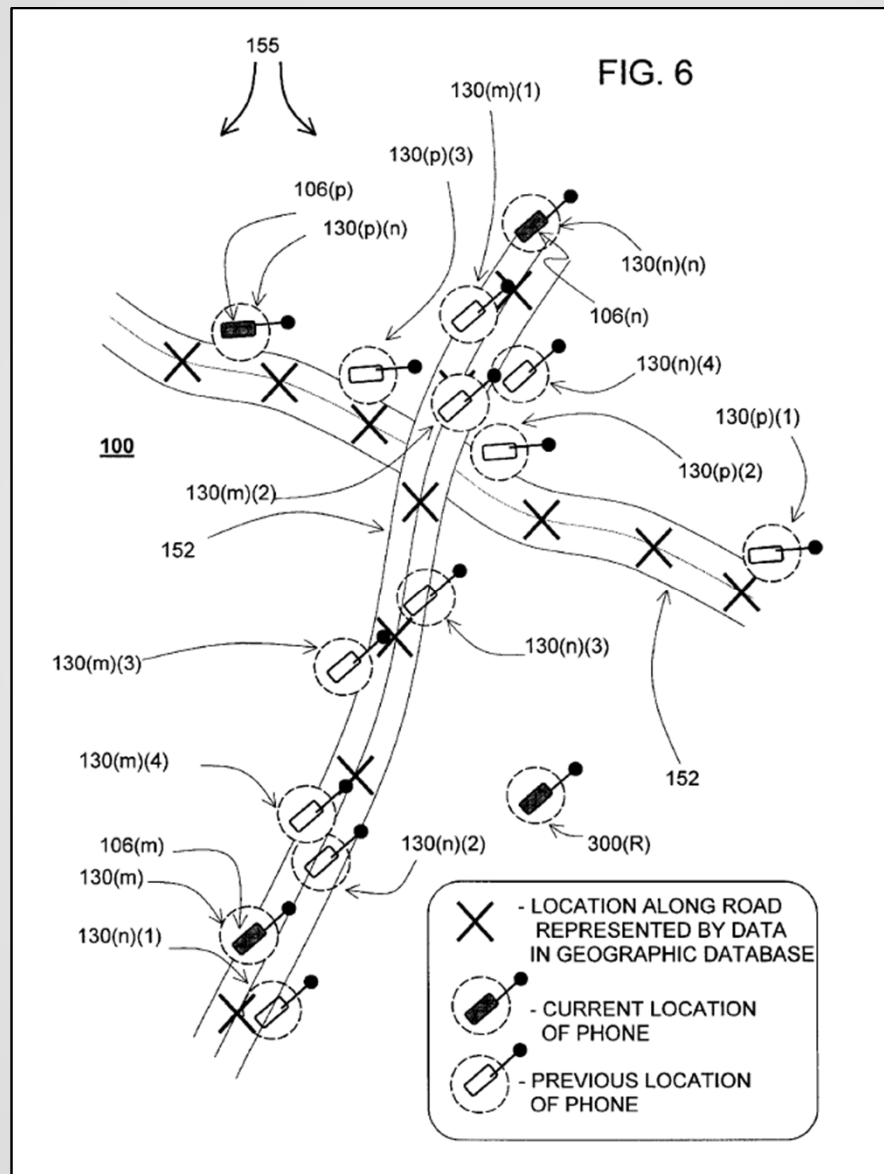
The matching process 256 optionally includes other processes 260 that perform analysis and filtration of the data 140. The analysis and filtration processes 260 may make use of several assumptions and/or observations. For example, if the acquired cellular position data 140 indicate that the cellular phone is on or within a certain threshold distance of the position of a road 152 or is moving, the cellular phone can be assumed to be inside of a vehicle traveling along the road. This is illustrated in connection with FIG. 5. In FIG. 5, straight dashed lines 266 are shown connecting the points 150 that are located along the actual roads (152 shown in FIG. 3) and for which data (174 in FIG. 4) are included in the geographic database to represent the positions of the roads. The straight dashed lines 266 in FIG. 5 approximate the actual paths of the roads represented by the points 150.

Ex. 1004 at 4:1-14;

IPR2023-01213 Por, 3-4;

IPR2023-01213 Sur-Reply, 2-3

Crane [Ex. 1004] FIG. 6



Ex. 1004 at FIG. 6;
IPR2023-01213 Por, 4;
IPR2023-01213 Sur-Reply, 1

PETITIONER'S REPLY TO PO'S RESPONSE

Third, Patent Owner disingenuously misinterprets the “152” label in Crane to incorrectly argue that Crane only discloses whether a phone is located on any road “152.” As indicated in the Petition and as correctly understood by the Board, “Crane teaches using location information to determine which **actual road** [among the roads 152] the phone is located on. [EX1004] at 4:17-22.” Petition at pp. 33-35 and ID at p. 29 (emphasis added). Label “152” is not only referenced in Figures 3 and 6 and at 3:33-36 of Crane (as cited by the Patent Owner), it is also explicitly referenced in connection with Figures 4 and 5 and at 3:38-40, 3:43-48, 3:52-55, 3:59-63, and 4:4-14. Notably, column 4, lines 4-14 of Crane state that “if the acquired cellular position data 140 indicate that the cellular phone is on or within a certain threshold distance of the position of *a road 152* or is moving, the cellular phone can be assumed to be inside of a vehicle traveling along *the road* [emphasis added].” Thus, at least column 4, lines 4-14 of Crane and this reference to label “152” disclose

determining a most likely one of said plural streets upon which said wireless device is located as confirmed by the uncontested testimony of Petitioner's expert, David Hilliard Williams. EX1008, ¶¶147-152.

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