ATTACHMENT A

Google v. Traffic Information

Presentation by Google

Introduction

Phillips v. AWH Corp. (Fed. Cir. 2005)

o "[T]he line between construing terms and importing limitations can be discerned with reasonable certainty and predictability if the court's focus remains on understanding how a person of ordinary skill in the art would understand the claim terms."

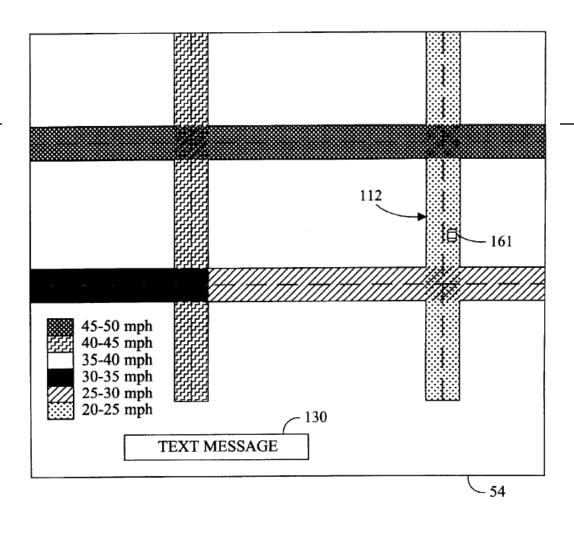


FIG. 6

IPXL Holdings, L.L.C. v. Amazon.com, Inc. (Fed. Cir. 2005)

 "A claim is considered indefinite if it does not reasonably apprise those skilled in the art of its scope."

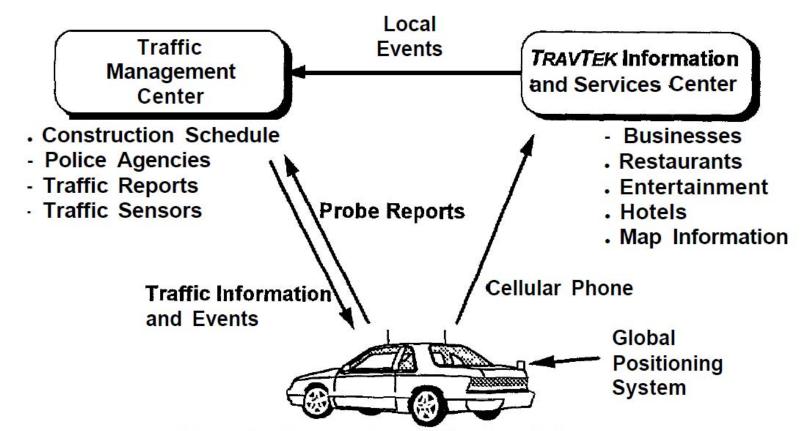


Figure 1. An overview of the TravTek system.

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Patent No.:			
Issued:	October 15, 2002	Reexamination Control No.: 90/010,645	
Inventor:	Bruce W. DeKock et al.	Reexamination Filing Date: September 25, 2009	
Serial No.:	09/550,476	Art Unit: 3992	
Filed:	April 14, 20		L
For:	SYSTEM F		
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Alexandria	, VA 22313-145		
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Date: 8/16/2010 By: 2

Kevin L. Russell Registration No. 38,292 Chemoff, Vilhauer et al. Attorney for Patent Owner

Indefiniteness

Indefiniteness

Case law

IPXL Holdings, L.L.C. v. Amazon.com, Inc. (Fed. Cir. 2005)

 "A claim is considered indefinite if it does not reasonably apprise those skilled in the art of its scope."

Halliburton v. M-I (CAFC 2008)

 "Even if a claim term's definition can be reduced to words, the claim is still indefinite if a person of ordinary skill in the art cannot translate the definition into meaningfully precise claim scope" (at 1251)

United Carbon v. Binney & Smith (CAFC 2005)

o "The statutory requirement of particularity and distinctness in claims is met only when [the claims] clearly distinguish what is claimed from what went before in the art and clearly circumscribe what is foreclosed from future enterprise." [at 236]

Markman v. Westview (CAFC 1996)

o "The limits of a patent must be known for the protection of the patentee, the encouragement of the inventive genius of others and the assurance that the subject of the patent will be dedicated ultimately to the public. . . . (cont.)

Markman v. Westview (CAFC 1996)

 Otherwise, a zone of uncertainty which enterprise and experimentation may enter only at the risk of infringement claims would discourage invention only a little less than unequivocal foreclosure of the field." [at 390]

Found indefinite:

- at least about 160,000" Amgen
- o "aesthetically pleasing" Datamize
- claimed compound could not be identified by testing - *Morton*
- "means for dispensing" (no corresponding structure found) – Default Proof

ICU Medical v. Alaris, 558 F.3d 1368 (CAFC 2009)

- "It is entirely proper to consider the function of an invention in seeking to determine the meaning of particular claim language."
- Indefinite because species did not support generic claim.

Oakley v. Sunglass Hut (CAFC 2003)

- "vivid colored appearance"
- decided on preliminary injunction
- o "one skilled in the art would interpret the phrase...in light of the specification to require that the maximum differential effect equal or exceed about 5.45%"

Modine v. ITC (CAFC 1996)

- "relatively small"
- no construction was approved by the CAFC because not required
- definite because of precise dimensions set out in specification

Haemonentics v. Baxter (CAFC 2010)

- "radius" "height" (could be measured in several places)
- Specification led court to identify inconsistent measurement methods with separate claims

Haemonentics v. Baxter (CAFC 2010)

 "Where, as here, claims are susceptible to only one reasonable interpretation and that interpretation results in a nonsensical construction of the claim as a whole, the claim must be invalidated." (at 781)

Haemonentics v. Baxter (CAFC 2010)

"Haemonentics argues...[that the construction] would yield an absurdity. Maybe so, but we do not redraft claims to contradict their plain language in order to avoid a nonsensical result." (at 782)

Indefiniteness

"said user" - no longer at issue

Indefiniteness

"traffic information"

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determine with confidence on which read the mer in tereding. The use of the directional vector thus prevents the comparer system 46 from inconvertly spatiage to traffic information disables, its oblition, the districts component of the GPS-that may be used to discinnizate between usons on companion or roads that are vertically offset from one of the control of the Met are the trans of transmission men by memory unders the

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reteived from the particular near would be rejected.
Abstractively, the computer system 40 may be associated with a system that allows a use to sequent associated in the create of a benefatives. The computer system 40 contributed be new shelder the user law reported a benefatives, and if so, as reject the traffic data.

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to what the speed fissails is spend of traffic on the sosrelative speed earlier the property of the transport of the transport of the traffic speed and tr While the remost married has been described in the test and the level an

communication. The terms and expressions which have been omplayed in the foregoing specification are used therein as terms of description and not of limitations, and there in no instation, in the use of such same and expressions, of excluding applications of the futures shown and described or pertinen thereof, it being recognised that the neape of the investion is defined and limited only by the clauses which follow.

A Aspecto for providing traffic information to a plantity of mobile source connected to a network, everprising: (a) a plantity of traffic monitors, each said traffic monitor comprising at least a chiracter and a transmitter, said detector providing a signal including data representative of vehicular movement and said transmitter transtite of vehicular movement and said transmitter trans-

(5) a prociver, rememby located from said transmitter, that receives said signals transmitted by said traffic monitors, and
(6) a computer system interexented with said receiver

 (d) a metride user station connected to a global positioning system receiver, a display, and a communicating device; and
 (a) said computer system, in response to a request for

What is claimed is:

- 1. A system for providing traffic information to a plurality of mobile users connected to a network, comprising:
 - (a) a plurality of traffic monitors, each said traffic monitor comprising at least a detector and a transmitter, said detector providing a signal including data representative of vehicular movement and said transmitter transmitting said signals;

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BRIEF DESCRIPTION OF THE SEVERAL

FIG. I shows a submanife of an energitary methodismat of a system for providing traffic information. 1901 2 shows a front elevational view of an examplary methodismatics.

190. 3 shows an exemplary display for a ware station. 190. 4 shows a webeastic view of an examplary embodiment of a models user unit of the present investion. 1911. 5 as a potal electrical educatic to a traffic months as if 1915. 2. 1916. 6 in an alternative exemplary display.

should never of a serious of stellar mechanical and a simple 190. Soborts stellar contributed policy in a new ration, 190, 9 to a flow obset for a material of processing which is to a joint scale indemention. Fig. 10 is a flow attent for an advantage method of processing wides after two yield wells authorisation. Fig. 10 is a flow attent for an advantage on the following 190 and 190

FIG. 12 is a contributed may and traffic information desture representative of the road system depicted in FIG. 11. ar FIG. 12 is an examplery embediment of a summer distance. FIG. 14 is an exemplary embediment of an other display.

FIG. 15 is an exemplary embediment of a look about display.

FIG. 16 is a schematic diagram of a mobile over station having alternative mechanisms for inputing commands to

DETAILED DESCRIPTION OF THE

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Referring now to the figures, wherein like numerals refer to like elements, FIG. 1 shows a schematic diagram of the system 10 for providing traffic information to a plurality of user stations 52 connected to a network 50. A plurality of traffic monitors 20 are arranged at spaced apart locations along a road 12. The traffic monitors 20 measure traffic information by detecting the speed (velocity) or frequency of vehicles traveling along the road (freeway or highway) 12. For example, in one embodiment, the traffic monitors 20 may detect. the speed of individual vehicles 14 traveling along the road 12. Alternatively, the traffic monitors 20 may measure the frequency with which the individual vehicles 14 pass specified points along the road 12.

Indefiniteness

"less than all available traffic information"

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2. The system of chief I Worksto said computer system spelenes and wife information chaeses based on data derived from a phrodity of a trifle members.

3. The system of cined 2 Worksto said computer systems compared that from said method near statems with said data derived from said trifle constant-below spelling said which subtracted from the constant-below spelling said which information databases.

4. The system of claim 1 where it said at heat one of said and trivial spelling spel

Surbar comprises a memory capable of entring a map ³⁵ distribuse.

4. The system of claim 5 wherein said mobile user station displays a school portion of said map database.

7. The system of claim 1 sharein cath said mobile user station powishes longitude and leithede information to said. ¹⁵

9. The reports of claim 1 wherein and company systems are some other provided by our distribute some ratioses to date: some whether said date corresponds to actual writin conficient.
18. The options of claim 1 wherein said company system their corresponds to actual writin conficient system company said signal associated with said prayection good people for existing a size described with said prayection good graphs because in taked one of said models over missions with

said may destrive below updating und tradic indemantion.

If A system for providing staffic information to a plarially of emble some connected to a network, comprising.

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menointing review and a interview, and computer spision being capith of meeting and vocaving signatus to and from said enables more motions; (s) said computer system enabling a map detabase and a write information disabase, said traffic information as delabase containing data representative of the fifth as a plintally of locations; (4) at least one of said mobile user stations providing a

(6) of least one of soid mobile over stations providing a signal association with a superfixer prographic because of said one of said mobile soor extense, and in exposure themes, and computer a sporse supplies paid tradition there are not supplies to the superfixer paid tradition of said one of said stocked soor said groupspile location of said one of said stocked soor saids (superpixel) location of said one of said stocked soor saids (superpixel) associaried with sood superpixel groupspiles location of said one of said mobile soon stocked location of said saidses of said mobile soor stations with said map-database before updating said tradit information finishess.

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15. The system of claim II whereig said computer updates said traffic information database based of 16. The system of claim II who aim and mobils were nation further comprises a successy capable of soring a way distribute.
17. The system of claim 18 who aim and mobils were attimed displays a solventh portion of said map distribute at sales displays a solventh portion of said really internation distribute.
18. The system of claim III when in each said mobils were analyse provides in oughtst and industry information on said really invasive information or said.

compute system:

10 IF The system of claim II whose in said location of said one of said mabble user statems is displayed graphically.

20 The system of claim II wherein said computer system acreem data provided by said mobile user stations to determine whether said data corresponds to actual tentile condi-

21. A system for providing radiic information to a planking of multi-le scare common-field to a network, comprising (i) a placatity of walfac monitors, each said traffic monitor comprising at least a delector and a transmitter, and detector providing a signal including data requirements for of valuation monogeneous and said transmitter transmitting used eigenbox.

 (b) a socious that encolves said nigrath transmitted by used stuffer associates;
 (c) a computer system interconnected with said receiver and said network;
 (d) a sociate way states connected to a global positioning

spaces receives, a display, and a communication device;
(a) said computer system providing to said one of sais models uses maken traffic information representatiof said signals transmitted by said traffic monitors;

minute user automa territor interession representació and signals transmission del pode della escritoria, con la superioria del productivo del pode del pode spatem in deplicipo grapicación os additionacións del parcela escritoria del provisión del productivo del pode above del mobile sucero, conservició de a microsión, econoprissing:

(a) a plansibly of traffic monitors, each said traffic most composing or least a detection and a transmitter, as describe providing a signed including data representive of voluciate netwoment and said transmitter tramitting used signeds; (b) a requirer that necessary said signeds transmitted by a traffic monitors;

22. A system for providing traffic information to a plurality of mobile users connected to a network, comprising:

(g) wherein less than all available traffic information is displayed by said display.



route are needed by the route selection function in the TravTek vehicle in order for that function to determine the shortest route.

Claim 22 patentably distinguishes over TravTek by claiming that the less than all available traffic information is "displayed...[on] said display." Subparagraphs (f) and (g) of claim 22 need to be construed in such a manner that they are consistent with one another. On the one hand, subparagraph (f) claims "traffic information," as transmitted by the computer system, being displayed graphically.

Indefiniteness

"representative of"

CollegeNet v. XAP (D.Or. 2004)

 "It is also improper to eliminate, ignore, or 'read out' a claim limitation from a claim in order to extend a patent to subject matter disclosed, but not claimed." US 6,466,862 B1

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driving.

While all of the above systems provide some degree of traffic information for a commuter, nevertheless the above systems do not provide an efficient method of collecting and presenting objective traffic information to a commuter. What is desired, therefore, is a system for providing traffic information which allows a commuter to obtain information at any time desired by the commuter, that provides information relating to a plurality of points along a road, that provides information relating to different traffic levels, that provides information that is particularly relevant to the commuter, and that provides the information in an easily understood format that may be easily utilized by a commuter while

When a user requests traffic information from the computer system 40, the computer system 40 transmits the requested data based on either the geographic location of the 40 user, or for the geographic location requested by the user. The computer system 40 either sends the raw traffic data requested by the user, or sends a signal representative of the map and/or traffic database which may be used by the user station 52 to represent the map and traffic information on the 45 display 54.

Specific Term Construction

Specific Term Construction

"traffic information"

"traffic information"

- "the current speed, frequency, or flow of multiple vehicles traveling along a road as detected by one or more traffic monitors"
- "data regarding traffic conditions, which data can include, but is not limited to, the speed, velocity, motion, density, flow, or frequency of vehicles on a road, and/or other data representative of the movement of vehicles on a road"

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determine with confidence on which road the mer is tracining. The use of the directional vector thus prevents the company system 40 from incomercity apiding the traffic information districts. In oblition, the altitude component of the LTPs data may be used to destinate the three on most on overlapsing or tooch that are vertically office from our companion or touch that are vertically office from our traffic and the state of the control of the control of the NM starther trans of measurements are by recovers when the

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restricted from the particular near would be rejected.

Alternatively, the computer system 40 may be associated with a system that allows a work to separal associated with a system. The computer system 40 would check to see whether the user has reported a breakdown, and if so, 2 reject the traffic data.

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While the present members has been described in the Maria was a few and the second with the described with the state and the least and the second with the described with the second with the

The terms and expressions which have been employed in the foregoing specification are used flexish as terms of cheerigines and not of limitation, and there is no instation, in the use of such terms and expressions, of excluding equivalence of the funence shows and described or pretions thereof, a being secognised that the neape of the instantion is defined and limited only by the clauses which follow.

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comprising at least a chiractor and a transmitter, said
detector providing a signal including data representative of vehicular movement and said transmitter transtive of vehicular movement and said transmitter trans-

(b) a prociver, nonorally located from said transmitter, that procives said signals transmitted by said traffic monitors; and

(d) a mobile user station connected to a global positioning system neceivor, a diaglay, and a communicating device; and this said computer system, in response to a region for

What is claimed is:

- 1. A system for providing traffic information to a plurality of mobile users connected to a network, comprising:
 - (a) a plurality of traffic monitors, each said traffic monitor comprising at least a detector and a transmitter, said detector providing a signal including data representative of vehicular movement and said transmitter transmitting said signals;

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BRIEF DESCRIPTION OF THE SEVERAL

FIG. Extense a submants of an energiary antical annual of a system for providing traffic information. 150: 2 shows a frost elevational view of an enemplay with marries.

200. 3 stores an exemplary display for a seen sinten-100, 4 shows a softenative view of an exemplary embodical of a mobile user sent of the present invention. 2011 5 in a partial electrical schematic for a traffic momitor, 150-2. 2. 200-6 in an abremative exemplary elegible.

Story Motions a substitution with our database are enempting story. The control of the control of studies control using a root. FIG. 3 from a method control of the control of the control of the control of the control of processing which can be sufficient to be valid to either authorities. FIG. 10 in a from our state they are alternative, matter of all other control of the cont

PG. 12 is a continued map and traffic information database representative of the road severe depicted in FIG. 11. ar IFO. D is an examplery embediment of a summed disease. FIG. 34 is an exemplary embediment of on effect display FIG. 35 is an exemplary embediment of a lovel about nature. 35G: 36 is a schematic diagram of a mobile near statum event alternative mechanism for appelling commands to

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there pensional from technic from technic pensional Zi e demonstrative comment approximation Referring now to the figures, wherein like numerals refer to like elements, FIG. 1 shows a schematic diagram of the system 10 for providing traffic information to a plurality of user stations 52 connected to a network 50. A plurality of traffic monitors 20 are arranged at spaced apart locations along a road 12. The traffic monitors 20 measure traffic information by detecting the speed (velocity) or frequency of vehicles traveling along the road (freeway or highway) 12. For example, in one embodiment, the traffic monitors 20 may detect. the speed of individual vehicles 14 traveling along the road 12. Alternatively, the traffic monitors 20 may measure the frequency with which the individual vehicles 14 pass specified points along the road 12.



detector 22. The detector 22 may be any type of measuring device which is capable of measuring or otherwise sensing traffic and generating a signal representative of or capable of being used to determine the traffic conditions. For example, the detector 22 could measure the average speed of the vehicles (cars or trucks) 14 at locations along the road 12, or it could measure the individual speed (velocities) of each vehicle 14. The detector 22 may detect vehicle frequency, that is, the frequency at which vehicles pass a certain point, or may measure traffic flow, consisting of the number of vehicles passing a certain point for a unit of time (e.g., vehicles per second). The detector 22 may use any suitable

Device Terms

Device Terms

- Traffic monitor
- Mobile user station

"traffic monitor"

"traffic monitor"

- A stationary device capable of determining the current speed, frequency, or flow of multiple vehicles traveling along a road
- Any device used to sense, measure, detect, and/or determine vehicular movement and transmit and/or provide a signal representative of vehicular movement

What is claimed is:

 A system for providing traffic information to a plurality of mobile users connected to a network, comprising:

- (a) a plurality of traffic monitors, each said traffic monitor comprising at least a detector and a transmitter, said detector providing a signal including data representative of vehicular movement and said transmitter transmitting said signals;
- (b) a receiver, remotely located from said transmitter, that receives said signals transmitted by said traffic monitors; and
- (c) a computer system interconnected with said receiver and said network;
- (d) a mobile user station connected to a global positioning system receiver, a display, and a communicating device; and
- (e) said computer system, in response to a request for traffic information from one of said mobile user stations, providing in response thereto to said one of said mobile user stations traffic information representative of said signals transmitted by said traffic monitors;
- (f) wherein said traffic information transmitted by said computer system is displayed graphically on said display; and
- (g) wherein said computer system has a map database, and said computer system, in response to said request for information, transmits map information representative of a portion of said map database, and said map information representative of said map database is displayed graphically together with said traffic information.

- US notes
- An anticology of the control of the

 Traffic monitors and mobile user stations are distinct devices US 6,466,862 B

comparies, so i-sign beautiful side which it is used interface includes a read may derive a principle of read interface includes a read may derive a principle of read interface includes a read may derive a principle of the read interface to a produce of the sign side of the side of

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with the area.

Plearnesh at al., U.S. Pat. No. 5,573,079, disclose a system for dynamic monitoring of the total staffic in a strictle of road a conjugated with monitoring and information-provision system, in well as warnings to driven, and honce the possibility of impleiting the traffic. The system does not exquire that the vehicles be uprayed with appropriate some and monitoring confirmers.

seen and transmitting apapheness. Address with all 1,00 Feb. 3th 5,50m 7,374, Glockness resided of Address with all 1,00 Feb. 3th 5,50m 7,374, Glockness resided elevation shall be a small and a whollow. The volkish makes a data transmitter for another and resident persons which are stated to the volkish when the volkish peases were the severability of the data providing drives and after sources the exceeding of the data providing drives and after sources the travelsing data may include volkish pass time or whole pass time and speed. The data providing drives late for the most include a receiver the receiving the travelling data from the wholle and a featurement for seading source passing whiches, which and a featurement for seading source passing whiches,

the data providing devices half on the read can see the securind shalf date from the valuables to profit the coars searce of shift congretion based on the gave time and speciment of a valuable. It is amounted that at a certain time und the equal of a valuable in some of the companion of the equal of wear terrolling secondity at a certain time and the equal of the coarse it is expected that readill companion will cover in the visionly of their point. Therefore, smooth turred can be actived by, for exempting, communicating to each valuable of the certain of the contraction of the contraction of the certain of the contraction of the certain of the older of the terrolling rease of a valuable which has already

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The traffic information database may be derived from information obtained from stationary traffic monitors, mobile user stations, or a combination thereof. The mobile user station allows traffic information to be displayed in a variety of manners. The display can also show graphically the location of the car on the display. The user may select among different modes for displaying traffic information on the display.

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requesting information or operating. The system may thus use the information received from the user stations 52 either to calibrate the traffic information provided by monitors 20, or to supplement the traffic information provided by the traffic monitors 20. Alternatively, where the number of users is sufficiently large, the traffic monitors 20 may no longer be necessary, because the users themselves through mobile user stations 52 and GPS receivers 62 provide enough traffic information to generate useful displays of traffic information. Thus, the system may provide traffic information without the use of monitors 20 at all, relying solely on information derived from the mobile user stations 52. With

Phillips v. AWH Corp. (Fed. Cir. 2005)

o "[t]he main problem with elevating the dictionary to such prominence is that it focuses the inquiry on the abstract meaning of words rather than on the meaning of claim terms within the context of the patent." *Phillips*, 415 F.3d at 1321.

SciMed Life Sys. v. Advanced Cardiovascular Sys., (CAFC 2001)

- Watts v. XL Sys. (CAFC 2000)
 - Specification described only one method to achieve pipe joint sealing connection
- Wang Labs v. America Online (CAFC 1999)
 - Only character-based protocol described and enabled in patent, bit-mapped display systems excluded from scope of claims
- Cultor v. A.E. Staley Manufacturing (CAFC 2000)
 - Limited to polydextrose purification process using citric acide catalyst
- O.I. Corp. v. Tekmar (CAFC 1997)
 - Patent described only non-smooth or conical passage structures
- Toro v. White Consolidated Indus. (CAFC 1999)
 - Restriction ring interpreted as permanently attached where specification and drawings did not describe or illustrate any other structure

Therefore catheter included only coaxial lumens, not dual or side-by-side lumens

Inpro II v. T-Mobile (CAFC 2006)

 "Although claims need not be limited to the preferred embodiment, when the invention is more broadly described, neither do the claims enlarge what is patented beyond what the inventor described as the invention." *Inpro II*, 450 F.3d at 1354-55. Traffic monitors are stationary devices US 6,466,862 B

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Patrach it al., U.S. Pat. No. 5,073,079, disclose a syntom for dynamic monitoring of the total traffic in a switch of road yeappoped with monitoring and information-provision system, as well as warnings to distron, and honce the proability of regulating the traffic. The system does not require that the voliticits he apolyped with appropriate season and transmitting application.

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the data providing devices had on the read can use the movived useful can from the vehicles to prodict the convennear of staffic congestion based on the pass time and speed of a vehicle. Be assumed that as certain point, vehicles were travelling associably at a vectors time and the speed of this case it is expected that staffic companion will occur in the vicinity of that point. Therefore, smooth terrol can be achieved by, for example, communicating to each vehicle data exi. indicating bypaness in order not to swowns traffic evolution of the contract of the order of the travelling state of a vehicle which has a beauty

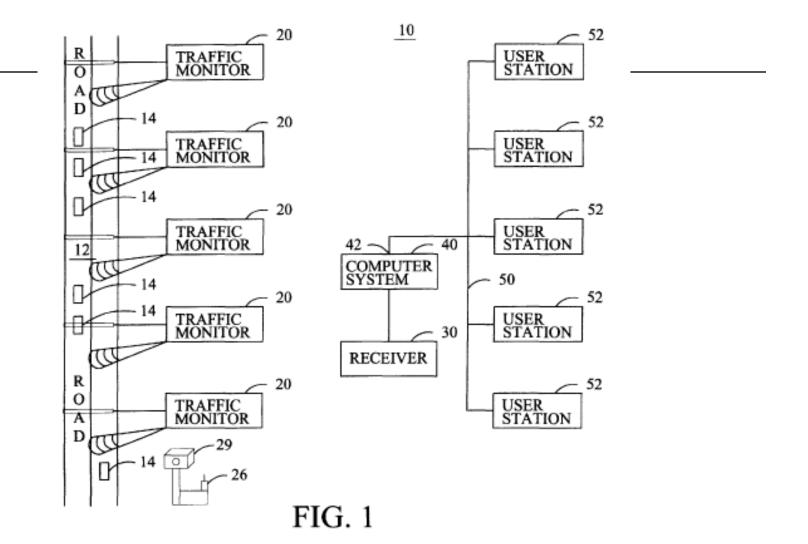
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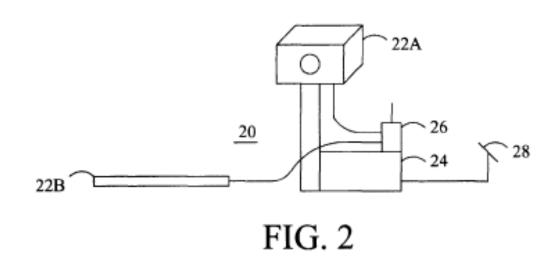
BRILE SUMMANY OF THE INVENTION.

The present invention overcomes the limitations of point as the generalizing as system for providing traffic in animation to a globully of some connected to a network. It feet agent the present invention provides a system or animation to a state of the present invention provides a system or animation to the state of the s

to a successio separate asquer of the investment, a synchronized provides traffic inflormation to a plurality of mean contracts to a network. Traffic in detected at each of a plurality to a network. Traffic in detected at each of a plurality to incident since a contract of the location representative of the traffic at each of the location

The traffic information database may be derived from information obtained from stationary traffic monitors, mobile user stations, or a combination thereof. The mobile user station allows traffic information to be displayed in a variety of manners. The display can also show graphically the location of the car on the display. The user may select among different modes for displaying traffic information on the display.





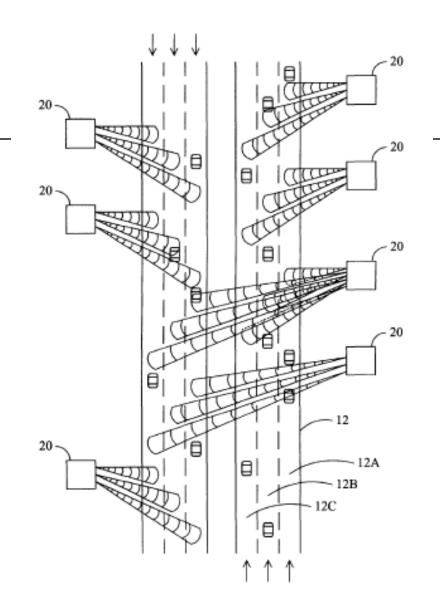


FIG. 7

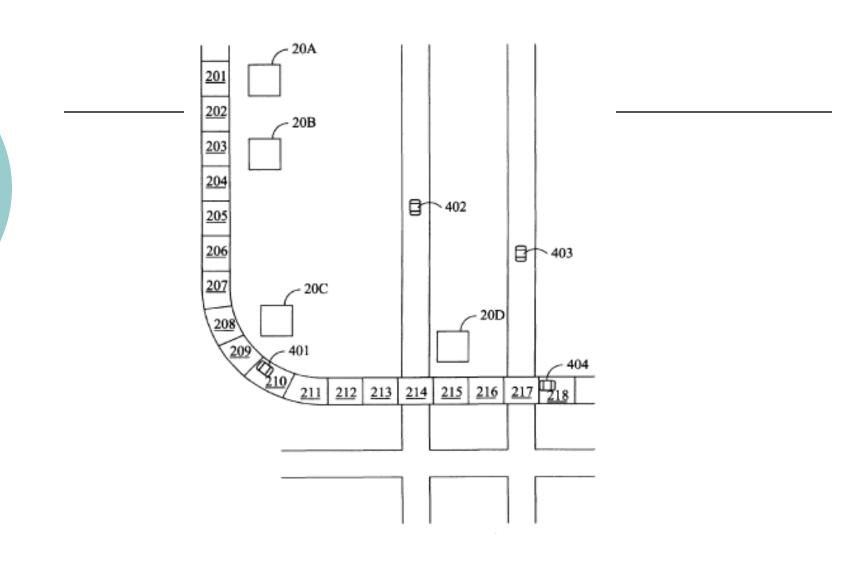


FIG. 11

The Name of the Control of State of Sta

Thus, the combination of the mobile user station 52, GPS receiver and transmitting and receiving units 64 provides an especially advantageous method for collecting traffic information. Surprisingly, this system is capable of providing traffic information that is superior to that collected by stationary sensors. This is because traffic information may be potentially collected at more locations based on the number of mobile user stations 52, and because individual vehicle speed can be monitored rather than average vehicle speed. In addition, the system has a significant cost advantage in that it is not necessary to install traffic monitors 20, or at least the number of traffic monitors 20 that are necessary can be substantially reduced. The system also provides automatic traffic reporting, and thus does not rely on the manual input of data. Furthermore, the system is low maintenance, since there are no traffic monitors 20 to maintain. The system is also particularly robust, in that if a particular mobile user station 52 malfunctions, traffic information can still be collected for all locations based on data reported by other mobile users. In contrast, if a stationary sensor 20 fails, no data can be collected from that location. Thus, the collection of traffic data from a plurality of mobile user stations 52 to create a traffic information database provides surprising advantages and a superior system for providing traffic information.

Traffic monitors must detect current information

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Similarly, the amount of time over which data is collected and averaged may be varied. Ideally, the traffic information presented represents traffic conditions at that moment in time. However, it may be necessary to collect data for a length of time in order to gather enough data to either report any traffic information at all, or to insure that the traffic information is truly representative of conditions at that location. Where traffic density is high, the length of time over which data is collected and used to determine traffic conditions may be short, for example three minutes. In contrast, where traffic levels are light, data may be collected for a long period of time, such as fifteen minutes. When used to determine traffic information, the data may be averaged over the period for which data has been collected. Alternatively, the traffic information could be weighted, so that older traffic information, though used, is given less weight when determining traffic information for a particular location.

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Thus, the system may inpent as follows. The millimention 20 decides can full for previous inflat information. The unific remainers 20 may observe or the information. The unific remainers 20 may observe or the traffic flow, which for glossymacy cord that approximation of the traffic flow, which for glossymacy cord that approximation continuously, or may sample a internal to conserve power. The transaction 26 transaction for signals provided by the all intervals. Such signals may be sintle associated decays to their cockies 26, or may be transaction of through other traffic massion 20. The energies of the content of transpired of the signal conserved for the processing of the signal content of the signal content of The state of the s

time traffer mentions 20. FIG. 3 shows an energity degrey 54 in which wide image 126 in provided. In all embediences, the water may select from which traffer more training may 26 the wideo image 126 in to be received for For excepts, a user costal mittally select to view the image generated by the video camers as a first location, and the later view the image transmitted by another video came. 28, preferreby an another traffic mentior 20, as a differ-

The system 10 preferredly further ancholes the delivery of the system 10 preferredly further ancholes the control of the system 10 control of the syst

The system 10 has many advantages. It allows a user to receive contemporaneous traffic information from a plurality of locations. It allows the user to obtain immediate information rather than waiting for the broadcast of information at specified times. Further, the amount of information provided by the system is far superior to that provided by any other traffic reporting system. A user can obtain immediate and contemporaneous traffic conditions, such as average vehicular speed, traffic flow, or vehicle frequency, for a plurality of locations along a road. Where traffic monitors

"mobile user station"

"mobile user station"

- A mobile device, distinct from a traffic monitor, capable of determining and displaying traffic information
- An easily moving or movable device that can transmit data to and/or receive data from the network.
 The mobile user station may be a cellular phone or other handheld unit, or may be installed within a car

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determine with confidence on which road the user is towcling. The use of the discretizeal vector thus provents the computer system 400 from incomedy updating the traffic information distribute. In addition, the adminds compenses of the GFS-fast may be used to discriminate between users on overgrames or studie that are vertically offset from one number.

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L. A system for providing traffic information to a pi of mobile users connected to a network, company, (a) a plurality of traffic monitors, each said traffic comprising at laws a forecast and a traffic minshibitor providing a signal including data tops (b) of which are reversion and said transmitter mixing said signals.

(v) a nonetwer, tentionery accumentation has transmiss nonetwer said signature transmitted by said traffition; and (c) a computer system intraconnectured with said and said metwork; (d) a mobile user station commended to a global powsponen receiver, a display, and a communidericie; and

tractic information from one of said model stations, providing in response thereto to said said models uses reations traffic information to trains of said signals transmitted by said staffition; (f) wherein said staffic information transmitted or company system in Coppergod graphically on s

agi waterus mad coupled system as many castern said competer system, in enginees to said rops information, transmits may information represenor a perior of said may database, and said information representative of said may datab desplayed graphically sugether with said traffic articles.

2. The system of claim II whence said traffic infor A system for providing traffic information to a plurality of mobile users connected to a network, comprising:

- (a) a plurality of traffic monitors, each said traffic monitor comprising at least a detector and a transmitter, said detector providing a signal including data representative of vehicular movement and said transmitter transmitting said signals;
- (b) a receiver, remotely located from said transmitter, that receives said signals transmitted by said traffic monitors; and
- (c) a computer system interconnected with said receiver and said network;
- (d) a mobile user station connected to a global positioning system receiver, a display, and a communicating device; and
- (e) said computer system, in response to a request for traffic information from one of said mobile user stations, providing in response thereto to said one of said mobile user stations traffic information representative of said signals transmitted by said traffic monitors;
- (f) wherein said traffic information transmitted by said computer system is displayed graphically on said display; and
- (g) wherein said computer system has a map database, and said computer system, in response to said request for information, transmits map information representative of a portion of said map database, and said map information representative of said map database is displayed graphically together with said traffic information.

Data terms

Data Terms

- Data representative of traffic/traffic information database
- Vehicular movement
- Less than all available traffic information/selected portions of said traffic information database
- Providing...in response

"data representative of traffic/traffic information database"

"data representative of traffic/traffic information database"

- The current speed, frequency, or flow of multiple vehicles traveling along a road
- No construction needed, or "a collection of traffic information"

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3. The system of claim I wherein said traffic information is displayed with a last message.
4. The system of claim I wherein said traffic detector discuss whether speed.
5. The system of claim I wherein said traffic detector whether speed.
5. The system of claim I wherein at least one of said 5 were mine transmiss disordly to said receiver.
6. The system of claim I wherein at least one of said.
7. The system of claim I wherein at least one of said traffic memories include as video causina.

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9. The system of claim 1 wherein said user provides latitude and longitude information to said computer system.

58. The system of claim 1 wherein said computer system, where said the information to provide to said southern system should not be considered to the said computer system sections said sufficient forthermore to provide to said southern switch growth and the said global position-line system received.

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Il. The system of claim 10 when its said computer system maintains a traffic information database containing the 20 representatives of traffic at a plantially of heatiness and spittines until retific air plantially of heatiness and spittines until retific information database in suspense to several freess and motion are retirementally suppless received freess and motion are interest motion motion mention and an admit and a several several

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(b) a nexiver interactives used rigash transmitted by said of sever riskinson, and (c) a congenity replant inferencement with said received and said commontant, said computer systems, in response to a neupone for inference on of said mobile work and said control of the said control of the said control of the said control of the said rigash transmitted by said mobile were said rigash transmitted by said mobile were resistons, (c) wherein said varieties inference congenies a displayed and said signature transmitted by said mobile several said said inference in consensative by said conjugate spream as considerable said inference in consensative by said conjugate spream as considerable said inference in consensative by said conjugate spream as considerable said inference in consensative by said conjugate spream as considerable said inference in consensative by said conjugate spream as considerable said inference in consensative by said conjugate spream as consensative by said conjugate spream as conjugate to the said inference in consensative by said conjugate transmitted to the said confusion of the said inference in consensative by said conjugate transmitted by said mobile spream as conjugate to the said inference in conjugate transmitted by said mobile spream and the said inference in conjugate transmitted by said mobile spream and the said inference in conjugate transmitted by said mobile spream and the said inference in conjugate transmitted by said mobile spream and the said inference in conjugate transmitted by said mobile spream and the said inference in conjugate transmitted by said mobile spream and the said inference in conjugate transmitted by said mobile spream and the said inference in conjugate transmitted by said mobile spream and the said inference in conjugate transmitted by said mobile spream and the said inference in conjugate transmitted by said mobile spream and the said mobile spream an

and information transmitted by said comparer system, as a simple specialisty on said displays, and G194beron said comparer system has a map databace, and a said comparer system, in response to said strengther system, in response to said strengther specialists of a simulational strength of the said compared to the said strengther specialists of a simulation strengther specialists of said inappleaballoss in finisher large applications. So The systems of claim 34 where its said compared as seen as

mantance a traffic information distributed containing information approximation of mellit at a planelity of bostiones and updates said really information database in response to signals reached from stationary stuffs enables. Bit. The spotters of classes 15 when in each computer system second class provide by said another under stations to delarmize better updating said wide information database. 17. The spotters of class 18 whenever the boardness of said.

system of claim I wherein said traffic information and display together with said traffic information provided with a last monage, system of claim I wherein said traffic information provided computer spiritum. The system of claim I wherein said traffic information of which is shown in a point on said display regardless, system of claim I wherein as loost one of said of some spiritum of claim I wherein as loost one of said of some spiritum of claim I wherein as loost one of said of some spiritum of claim I wherein as loost one of said of some spiritum of claim I wherein as loost one of said of some spiritum of claim I wherein said traffic information provided and computer spiritum.

which is shown at a point on said display segardless of a concurrent of said which.

19. The system of claim 19 wherein said displayed location of said which depends on said location of said which, so that the displayed location changes as the which's location change.

20. The system of claim 14 wherein said mobile menperature of the control of the control of the claim 14.

description traffic information on said display.

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municating device and a nerwork, said componer sysners being capable of sending and receiving signals in and from said mobile user stations: (c) said computer spitces including a map desidence and a traffic information disblatue, said traffic information

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27. The system of claid on time danabase and map le longitude and latinade in 28. The system of clair station provides longitude in station provides longitude. 21. A system for providing traffic information to a plurality of mobile users connected to a network, comprising:

- (a) a plurality of mobile user stations, each mobile user station being associated with a display, a global positioning system receiver and a communicating device to allow each of said mobile user stations to send and receive signals;
- (b) a computer system interconnected with another communicating device and a network, said computer system being capable of sending and receiving signals to and from said mobile user stations;
- (c) said computer system including a map database and a traffic information database, said traffic information database containing data representative of traffic at a plurality of locations;
- (d) at least one of said mobile user stations providing a

"vehicular movement"

"vehicular movement"

- The current speed,
 The velocity, frequency, or flow of multiple vehicles travling along a road as detected by one or more traffic monitors.
- speed, position, and/or change in position of a vehicle.

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the foregoing specification are used therein as terms description and ore of limitation, and there is no intentia description and ore of limitation, and there is no intential to the user of such terms used expositions, of exclude pupilvalents of the features observe and described or portion that the supplemental that the supple of the invasitait additional distinction of the claims which follows. What is chilered for. What is chilered for. What is chilered for the control of the property intentior of mobile super-operation of a network, compressions.

(a) a principle of effect (constructive and or transmission, so compressing at least a detector and or transmission, so detector providing a signal including data representive of velocities mercenosis and said semission is a mining said signals; (b) a recorrect, entered by hearted from said transmission, if acceives said signals transmitted by said stuffic metars, and

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1. A system for providing traffic information to a plurality of mobile users connected to a network, comprising:

- (a) a plurality of traffic monitors, each said traffic monitor comprising at least a detector and a transmitter, said detector providing a signal including data representative of vehicular movement and said transmitter transmitting said signals;
- (b) a receiver, remotely located from said transmitter, that receives said signals transmitted by said traffic monitors; and
- (c) a computer system interconnected with said receiver and said network;
 - (d) a mobile user station connected to a global positioning system receiver, a display, and a communicating device; and

"less than all available traffic information"/"selected portions of said traffic information database"

"less than all available traffic information"

- Cannot be defined from the specification
- The computer system may send traffic information corresponding to only some of the traffic monitors

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2. The systems of claim I wherein said computer system systems and useful information database based on desired from a planting of each construction. As The system of claim 2 wherein a discussion of the construction of the con

the recyclent of course is whitered taxes in most course to taxe.
 The systems of claims I withoride said metrits were station further compress a memory capable of storing a map flatcheau.
 The systems of claims 3 wherein said mobile user station flephops a solicoted position of aid map disablems.
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III. A system for providing staffic information to a plus nility of mobils ware connected us a reservint, comprising 50 (a p lareally of mobils were stations, each mobils user attack being mental with a freight part of a member attack being mental with a freight, and a remainstance of the staffic of the s

3b. The reption of claim 1b. selection and compare reprints provide to action of solar melotic new neutron information experienciative of selected perions of said traffic information elaborate based on said respective geographic location of said one of said mobile user station.
4b. The speam of claim 1b when said mobile succession of claim 1b when said mobile some station one-prints of singlet, and said one of said mobile some stations deployes graphically on said deploys information experienciative of selected perions of said traffic information database.

updates said traffic information database based on dat desired from a plurality of traffic menitors. 16. The systems of claim II wherein suid anable as ration further compenies a neutron cycletic resistant and anable as statement and anable control of the statement of the s

mine whether said date consequents to actual traffic credificies.

21. A quatum for providing traffic information as a plucility of models users consecuted to a network, comparing-(a) a plucality of traffic monitors, such said traffic monitorcompensing at least a desired used as assumment, said detactor providing a signal including data representation of volunches monetomes and such transmitter transtitude of traffic and traffic and the said of th

(b) a receiver that stockies said nignals instrumined by said nuffic mentions; (c) a computer system interconnected with said receiver and said network; (d) a mobile user station connected to a global positioning

(c) said computer system providing to said one of said making use trackes traffic information engowers of said signals transmitted by said staffic conduct, (b) said traffic information transmitted by said empowers agreem in depletred graphically on said display, 22 A system for providing traffic information to a photality of miletin sums.

22. A system for providing traffic information to a plurality of mobile users connected to a network, comprising:

- (a) a plurality of traffic monitors, each said traffic monitor comprising at least a detector and a transmitter, said detector providing a signal including data representative of vehicular movement and said transmitter transmitting said signals;
- (f) said traffic information transmitted by said computer system is displayed graphically on said display; and
- (g) wherein less than all available traffic information is displayed by said display.

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traffic monitors 20 to the requesting user station 52. The computer system 40 may transmit average speeds detected 20 by each of the traffic monitors 20 at each of their respective locations. The traffic information may be presented to the user as a web page. The computer system may send traffic information corresponding to only some of the traffic monitors. The user may select which portions of the road 12 are of interest, and the computer system 40 may transmit traffic information corresponding to that portion of the road 12.

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"selected portions of said traffic information database"

- . . .a subset of which is selected by the commuter
- Certain data from the map database and certain data from the traffic information database are transmitted to the mobile user station

fingnose problems, and otherwise provide input in traffic monitor 20 to facilitate collection of traffic data. For Example, the video camera 29 could be remotely positioned to view a traffic laws of interest.

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con Pre-se near relativiship retrained. Gen med Excellent designs of the control of the control of the distance, and the comparison of the present tends. Dist. 3 shows an exempting display 46 suplaying the Dist. 3 shows an exempting display 46 suplaying the comparison spaces 40 great 15, such as the control of the comparison spaces 40 great 15, such as the control of the comparison of the result 15, such as distances for the control of the design of the control of the control of the control of the design of the control of the control of the control of the design of the control of the design of the control of the

While the risplay 54 shows one forms for risplaying the information, other formats for presenting the information may likewise be used, as desired. It is not necessary to a provide a garphical representation of the road 12. Instead, information could be provided in a termal memory, such as, for example, mile goat leventure for each of the truffic monolese. 20 and presenting technal trul

Thus, the system may operate as meanings 20 detect or otherwise new traffic information. The staffer meaning observation is the staffer of the otherwise colories vederate uponly a staffic flow, which is frequency, or other the staffic. The staffer monitors 20 continuously, or may sample at interve Te transmisses 20 insuline 20 i

by the various traffic monitors 20 and passus these signals to the computer system 48. The computer system 40 receives the data from the traffic monitors 20. The computer system may calculate or process the traffic information for the ways, a necessary, it is not necessary for the traffic monitors 20 to calculate and the data. It desired. In response to a request from

The system Who many shrenges, fedures a cere in overce consequences and the electricate does in planting overce consequences and the electricate does not planting market rather than swring (or the breaked of inferences reported into a religion, the market of inferences pervioled by the cross is the inspired to the provided by any acquisited into a religion, the contrast of the provided by any acquisited into a religion of the provided by any acquisited provided by the complex of the provided by any acquisited provided by the complex of the complex and a provided along section of different suchs, depending any global soles among the sections distructure most, depending the soles among the sections distructure on the provided and acquisite and the section of the section of

In one sub-delinent, the computer system 49 also receives the signals generated by the video contents 29 at the respective stellar monitors 20: FIG. 3 shows an exemplary simply 5 fai switch a video image 220 is provided. In this condedinent, the user may when from which staffe menituring using 20 to video image 120 is not received from Fig. 20: The video image 120 is not be received from Fig. 20: The video image 120 is not be received from For exempt, a user could initially select to view the image generated by the video canceae at a fact the leading of the video canceae at a fact the leading of the last view the image transmitted by another video content 20, putterably a matter traffic received 20, at a different

useff missage a best and containers. Fig. 3 stores such as useff missage and the store finest. The computer system 400 is capital of saving thus meaning and transmission 400 is capital of saving thus meaning and transmission useff missage and the store of preferring the transmission and the store of the saving of preferring the store to the communities. For example, the leaf meaning 120 conditionals to the saving and the saving of the saving and the saving communities. For example, the leaf meaning 120 conditions are communities, or that highway conditions were particularly necessite and that alternative means should be selected. The system 10 county prevent enabling to measure through which the man could make it as the saving and the saving the form of the saving the saving the saving the saving the form of the saving the s

traffic monitors 20 to the requesting user station 52. The computer system 40 may transmit average speeds detected by each of the traffic monitors 20 at each of their respective locations. The traffic information may be presented to the user as a web page. The computer system may send traffic information corresponding to only some of the traffic monitors. The user may select which portions of the road 12 are of interest, and the computer system 40 may transmit traffic information corresponding to that portion of the road 12.

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Specific Term Construction

"providing...in response"

"providing...in response to"

- In response to a commuter's request, providing relevant traffic information for display by the mobile user station to minimize manipulation by the commuter while driving, the request and the response must occur simultaneously
- The computer system supplies traffic information in response to a request from a mobile user station
- The computer system, rather than only arbitrarily sending traffic information representative of said signals transmitted by said traffic monitors, is capable of sending traffic information representative of said signals transmitted by said traffic monitors to a mobile user station as a result of the mobile user station sending a request for traffic information to the computer system.

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The system of claim I wherein said traffic information is displayed with a text message.
 The system of claim I wherein said traffic detector distorts welicrafar speed.
 The system of the claim I wherein said traffic detector distorts welicrafar speed.
 The system of the system of

The system of citim 1 wherein at least one of said 1 transmitters transmits directly to said receiver.
 The system of claim 1 wherein at least one of said transmitters transmits to another traffic monalor.
 The system of claim 1 wherein at least one of said traffic monitors includes a video camera.

8. The system of claim 7 wherein said descroe is a video camera.
9. The system of claim 1 wherein said user provides heistode and hospitude information to said computer systems.
20. The system of claim 1 wherein said computer systems referen said traffic information to provide to said mobile user string heard on a sized morein from said dishipt anxiety.

In system control.

It. The system of claim B9-therics wall computer system materians a suffic adherence darkset containing data. In the control of the cont

14. A system for providing traffic autorization (July of mobile service connected to a setwed, cot (a) a plreality of twilcites, eich said which control has a mobile sor texture, an expectation providing a signal including data mobile sor providing a signal including data represents location of said mobile sor which was a signal of the signal and a let a speed of said which and as signal so speed of said which and as signal so speed of said which are a signal so speed of said transmitters for said providing and speed of said speed of said securities.

 (b) a receiver that receives said signals transmit user stations; and

(c) a computer system interconnected with said and native case, said computer system, in rea request for information from one of said me attainer, providing in enopense theories to sai said mebble user stations information represensaid signitis transmitted by said grobble user; to 60 wherein said wichtels further comprises a daniel information transmitted by said and computer and information transmitted by said and computer in displaying graphically on said display, and 50 wherein said computer system has a map datal

seed decremented transmitted by seed computer on displaying paphosity on said displays, and (6) wherein said computer system has a map data said computer system, in response to said reinformation, transmits information represent portion of said map database, and said interpresentative of said map database, and said interpresentative of said map database, in displays cally.

15. The system of claim 14 when in said components as a sufficient formation distallance contains too representative of walks at a plurality of the support of sufficient distallance in a signal received from stationary unified monitors. 16. The system of claim 15 when in said components of survival of two stations are sufficient survival of the survival of the survival survival of the survival survival of the survival s

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said display together with said traffic information provi by said computer system.

18. The system of claim 17 wherein said location of

18. The system of claim 17 wherein said location of said vehicle is shown at a point on said display regardless of movement of said vehicle.
19. The system of claim 17 wherein said deplayed location of said vehicle depends on said beceivin of said vehicle depends on said beceivin of said vehicle, so that the displayed location shunges as the vehicle, so that the displayed location shunges as the vehicle.

displaying raffic information on said display.

28. A system for providing tailfic information to a phrashry of mobile users consecuted to a network, comprising to a phankity of mobile user stations, each mobile user stations, tach mobile user station being associated with a display, a global positioning system receiver and a communicating device or

receive signalis; (b) a competer system interconnected with another communicating device and a network, said computer system being capable of sanding and receiving signals to and from said mobile were stations;

(c) said computer system including a map database and traffic information database, said traffic informatio database containing data representative of traffic at plurality of locations;
(d) at least ope of said mobile user stations providing

21. A system for providing traffic information to a plurality of mobile users connected to a network, comprising:

 (a) a plurality of mobile user stations, each mobile user station being associated with a display, a global positioning system receiver and a communicating device to allow each of said mobile user stations to send and receive signals;

(d) at least one of said mobile user stations providing a request to said computer system for information together with a respective geographic location of said one of said mobile user stations, and in response thereto, said computer system providing to said one of said mobile user stations information representative of selected portions of said map database and selected portions of said traffic information database based on said respective geographic location of said one of said mobile user stations; and

Default Proof Credit v. Home Depot

- District Court found indefinite
- "If one employs means-plusfunction language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language." [at 1298]

Haemonentics v. Baxter (CAFC 2010)

 "Where, as here, claims are susceptible to only one reasonable interpretation and that interpretation results in a nonsensical construction of the claim as a whole, the claim must be invalidated." (at 781)

Haemonentics v. Baxter (CAFC 2010)

"Haemonentics argues...[that the construction] would yield an absurdity. Maybe so, but we do not redraft claims to contradict their plain language in order to avoid a nonsensical result." (at 782)

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omerically, or in response to a request for such informa-

on from a sure. In souther cancellers embodies on, the computer system in souther cancellers embodies on, the computer system in souther cancellers of the product resident in the cancel in the cance

which will be stilling in the vertice that we find the contraction of the control of the memory to use of fine on bothers to order bostion should be read \$2.7 the conbotters being the read and produced the find the control of the control of the control of the control of the source of the country, and they will be the find the find the control of the control of the control of the control of the source of the control of the control of the control of the source of the control of

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18%. S shows yet another confectioned of a deploy 54, which displays solid information for each individual large-of the dividual forceasy shows on 18%. 7. For example, in display 54, the time conditions in each individual largelitation of the conditions in each individual largelitation of the conditions in continuous to extension 12.2 by displaying conditions for each particular large, the substance of physical conditions for each particular large, the substance is in the 182. To addition, by an administrative conditions, the substance is substantially an extension of the conditions, the display 54 is expetite of displaying the individual location of each individual value on the most large.

FIG. 4 shows an alternative embediment of a user station 52. User station 52 in a mobile unit in a car 64. User station 52 has transmitting and/or receiving units 44 for communicating with the network 59. Such transmitting and receiving or stable data, such as, for example, a dignit of analogy in the stable of the stable of the stable of the stable Data for stable in the stable of the stable of the stable that further include an associated gloral proteinsing system for the stable of the stable of the stable of the stable statement on location. When a construer requests that the stable of the stable of the stable of the star of the stable of the stable of the stable of the star of the stable of the stable of the stable of the star of the stable of the stable of the stable of the star of the stable of the stable of the stable of the star of the stable of the stable of the stable of the star of the stable of the stable of the star of the stable of the stab

station may also be a collising plotter with an integrand or associated GPS.

FIG. 6 shows a separametric display of the traffic information provided by the comparer system. We The information provided in executivity the same as that shows in FIG. 2, except that the chapity 50 excepts at \$11 the posture of the provided in the contract of the contract to dissociately deletering on that of shows the community to dissociately deletering the contract of the contract to dissociately deletering the contract of the contract to dissociately deletering the contract of the contract to dissociately destroyed that the contract to dissociate the contract values (used to not be consumed) to proceed to calcium. The community does not know to wait for a profession traffic report.

focusy.

Thus, in the embodiment shown in FIG. 4, the systement of the relevant traffic information to the commeter of user on a timely basis. The display may be ladored provide the information for the current location of the

FIG. 6 shows a representative display of the traffic information provided by the computer system 40. The information provided is essentially the same as that shown in FIG. 3, except that the display 54 contains at 161 the position of the car 60. The mobile user station 52 provides a significant advantage in that it allows the commuter to immediately determine traffic information in the commuter's immediate vicinity based on the commuter's present location. The commuter does not have to wait for a periodic traffic report. Further, traffic conditions are provided at a plurality of locations, and the information is contemporaneous. Based on the receipt of such information, the commuter may decide to use an alternate route rather than continue on the current freeway.

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Section 1. The control of the contro

the class providing devices, but on the small can see the security offsich does not the wheels to reside the concentrate of suffic congression based on the parts time and speed of a whole. It is smalled that it is called the providing of a whole is the same offset at a case in part, which is called the class in expectation of the security of the se

principle over the guest some suppose service concerning when Milks all of the Johns systems persists some degree of traffic information for a communic, recordinates that above systems do not provide a refliction related of ordinating and proceeding objective traffic information to a communic. What is a demand, Members, is a system for providing ratific infortation time, desirably the face constantly, that provides information which the state of the processing of the processing to a principle of senting to a principle of points along a sent, then provides information relating to different staffic levels, that provides information relating to different staffic levels, that provides information relating to the processing of the processing to a principle of the processing of the processing the processing and processing the processing of the processing the processing the processing to a principle of the processing to the community of the community.

elementaries relating to different treffic fewers, that provide discrepation that is positionally selement in the constituted that provides the information in an early authors count that may be easily self-ined by a constitute of treing.

The present intention conventions the limitations of the great and by providing a system for providing softs; information provides a system for providing softs; information of the property of the memory, and comprehens the great paper the ground terretions provides a system consist of a principle of the memory, and comprehens the great providing of significant provides a region of the providing of significant provides ratific and the memory of the providing of significant provides ratific and the memory of the provides o

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While all of the above systems provide some degree of traffic information for a commuter, nevertheless the above systems do not provide an efficient method of collecting and presenting objective traffic information to a commuter. What is desired, therefore, is a system for providing traffic information which allows a commuter to obtain information at any time desired by the commuter, that provides information relating to a plurality of points along a road, that provides information relating to different traffic levels, that provides

information that is particularly relevant to the commuter, and that provides the information in an easily understood format that may be easily utilized by a commuter while driving.