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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/155,221	01/31/2023	11568742	00199-0001-24000	5591

108449 7590 01/11/2023
Bookoff McAndrews, PLLC
2020 K Street NW
Suite 400
Washington, DC 20006

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 78 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Patents Stakeholder Experience (OPSE), Stakeholder Support Division (SSD) at (571)-272-4200.

INVENTOR(s) (Please see PAIR WEB site http://pair.uspto.gov for additional inventors):

Sean O'SULLIVAN, Princeton, NJ;

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

CARMA TECHNOLOGY LIMITED, Cork City, IRELAND;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

IR103 (Rev. 10/09)

PATENT
Customer No.: 108449
Attorney Docket No.: 00199-0001-24000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
Sean O'SULLIVAN et al.	)	Group Art Unit: 2648
	)	
Application No.: 17/155,221	)	Examiner: Keith FERGUSON
	)	
Filed: January 22, 2021	)	Confirmation No.: 5591
	)	
For: SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE	)	***VIA EFS WEB***

MAIL STOP ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

FEE ADDRESS FOR MAINTENANCE FEE PURPOSES IN ACCORDANCE WITH 37 C.F.R. 1.363

In accordance with the provisions of 37 C.F.R. 1.363, the fee address set forth below is being supplied for purposes of receiving notices, receipts, and other correspondence relating to the payment of maintenance fees:

CPA GLOBAL
2318 Mill Rd.
12th Floor
Alexandria, VA 22314
Customer No.: 00197

Respectfully submitted,

BOOKOFF McANDREWS, PLLC

Dated: December 27, 2022

By: /Joel S. Simon/
Joel S. Simon
Reg. No. 70271
(202) 808-3560

PATENT
Customer No. 108449
Attorney Docket No. 00199-0001-24000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)
Sean O'SULLIVAN et al.	) Group Art Unit: 2648
Application No.: 17/155,221	) Examiner: Keith FERGUSON
Filed: January 22, 2021	) Confirmation No.: 5591
For: SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE	) ***VIA EFS WEB***

MAIL STOP ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

COMMENTS ON STATEMENT OF REASONS FOR ALLOWANCE

Applicant thanks the Examiner for the Notice of Allowance and statement of Reasons for Allowance mailed on September 28, 2022, indicating that claims 2-6, 8, 10-18 and 22-26 are in condition for allowance. Without withdrawing any of the allowed claims from issue, Applicant submits these comments.

The Examiner made characterizations and assertions about the claims and the related prior art in the statement of Reasons for Allowance. Although Applicant agrees with the Examiner's ultimate conclusions that the claims are patentable because the prior art does not teach or suggest the claimed features set forth in the claims, Applicant does not necessarily agree with each or every characterization and assertion contained in the Examiner's statement.

Furthermore, it is understood that the Examiner's characterizations were for purposes of referring to the prior art, and do not in any way imply that the claims are limited by words not actually present in the claims. Therefore, unless expressly noted otherwise, Applicant declines to subscribe to any statement or characterization contained in the Notice of Allowance and its accompanying Reasons for Allowance.

Should the Examiner disagree with the Applicant's comments on the Reasons for Allowance, the Examiner is invited to contact the undersigned at (202) 808-3560, in order to resolve such disagreement.

Please charge any additional required fees, charge any underpayments, or credit any overpayment, to Deposit Account No. 50-5906.

Respectfully submitted,

BOOKOFF McANDREWS, PLLC

Dated: December 27, 2022

By: /Joel S. Simon/
Joel S. Simon
Reg. No. 70271
(202) 808-3560

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

168449 7590 09/28/2022
Bookoff McAndrews, PLLC
2020 K Street NW
Suite 400
Washington, DC 20006

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/155,221	01/22/2021	Sean O'SULLIVAN	00199-0001-24000	5591

TITLE OF INVENTION: SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$600	$0.00	$0.00	$600	12/28/2022

EXAMINER	ART UNIT	CLASS-SUBCLASS
FERGUSON, KEITH	2648	455-041100

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

☒ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Bookoff McAndrews, PLLC
2
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: CARMA TECHNOLOGY LIMITED

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Cork City, IRELAND

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☒ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

☒ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☒ The Director is hereby authorized to charge the required fee(s), ~~any deficiency~~, or credit any overpayment to Deposit Account No. 50-5906

5. **Change in Entity Status** (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Joel S. Simon/ Date 2022-12-27

Typed or printed name Joel S. Simon Registration No. 70,271

PTOL-85 Part B (08-18) Approved for use through 01/31/2020 OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/155,221	**12/27/2022 02:51:08 PM ET**	**00199-0001-24000**

Title of Invention

SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	5591	FILED BY	Sherie Hughes
PATENT CENTER #	61355386	FILING DATE	01/22/2021
CUSTOMER #	108449	FIRST NAMED INVENTOR	Sean O'SULLIVAN
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	Joel Simon

Documents

TOTAL DOCUMENTS: 3

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
00199_0001_24000_IFTrans.pdf	1	Issue Fee Payment (PTO-85B)	209 KB
00199_0001_24000_MainFeeTrans.pdf	1	Maintenance Fee Address Change	77 KB
00199_0001_24000_Comments.pdf	2	Post Allowance Communication - Incoming	100 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)

00199_0001_24000_IFTrans.pdf	962E37514B138843554AEDD3201D7A57C96278A8CCFD64523928AFE11966E8355F85931AAF81ADA2DF14AE9FD1B97FE9ABB5FE1089FF9CCA30415B0A030D5AC9
00199_0001_24000_MainFeeTrans.pdf	03F1E66E7B73AF2781ECB074E4C1EC11989B7827D10887C24AB0B42825E84CC15FE0FEDE1265994022EA1DF4A8B96CB8CCFF13AF93E97F53060D6C5C9ED365E5
00199_0001_24000_Comments.pdf	D3D5ABFBD6C0DCC993ECF016737F380D2EFE5166781D6FDFF3FF42AAA5503CEE6352DFD1DC2685C09D176AD9D221E135AC2FF2F152635CA386CB179A90CD290B

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/155,221	12/27/2022 02:51:08 PM ET	00199-0001-24000

Title of Invention

SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	5591	FILED BY	Sherie Hughes
PATENT CENTER #	61355386	AUTHORIZED BY	Joel Simon
CUSTOMER #	108449	FILING DATE	01/22/2021
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Sean O'SULLIVAN

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
CARD / 1006	E2022BQE52190431	Sherie Hughes

FEE CODE	DESCRIPTION	ITEM PRICE($)	QUANTITY	ITEM TOTAL($)
2501	UTILITY ISSUE FEE	600.00	1	600.00
			TOTAL AMOUNT:	$600.00

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

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NOTICE OF ALLOWANCE AND FEE(S) DUE

108449 7590 09/28/2022
Bookoff McAndrews, PLLC
2020 K Street NW
Suite 400
Washington, DC 20006

EXAMINER
FERGUSON, KEITH

ART UNIT	PAPER NUMBER
2648	

DATE MAILED: 09/28/2022

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/155,221	01/22/2021	Sean O'SULLIVAN	00199-0001-24000	5591

TITLE OF INVENTION: SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$600	$0.00	$0.00	$600	12/28/2022

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

108449 7590 09/28/2022
Bookoff McAndrews, PLLC
2020 K Street NW
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Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

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(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/155,221	01/22/2021	Sean O'SULLIVAN	00199-0001-24000	5591

TITLE OF INVENTION: SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE

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nonprovisional	SMALL	$600	$0.00	$0.00	$600	12/28/2022

EXAMINER	ART UNIT	CLASS-SUBCLASS
FERGUSON, KEITH	2648	455-041100

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1_____
2_____
3_____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. Fees submitted: ❑Issue Fee ❑Publication Fee (if required) ❑Advance Order - # of Copies _____

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

❑ Electronic Payment via EFS-Web ❑ Enclosed check ❑ Non-electronic payment by credit card (Attach form PTO-2038)

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29

❑ Applicant asserting small entity status. See 37 CFR 1.27

❑ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
FERGUSON, KEITH

ART UNIT	PAPER NUMBER
2648	

DATE MAILED: 09/28/2022

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 17/155,221	Applicant(s) O'SULLIVAN, Sean	
	Examiner KEITH FERGUSON	Art Unit 2648	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☑ This communication is responsive to 9/6/2022.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☑ The allowed claim(s) is/are 2-6,8,10-18 and 22-26 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐All b) ☐ Some* c) ☐ None of the:

   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☑ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.
5. ☐ Examiner's Amendment/Comment
6. ☑ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/KEITH FERGUSON/
Primary Examiner, Art Unit 2648

DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application is being examined under the pre-AIA first to invent provisions.

Allowable Subject Matter

2. Claims 2-6,8,10-18 and 22-26 are allowed.

3. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 2, the prior art of record fails to teach or suggest alone, or in combination receiving, by the shared transport system, provider route information associated with travel of a transport provider, the provider route information based on a (i) destination of the transport provider entered via a transport provider device of the transport provider and (ii) location data associated with the transport provider device; receiving, by the shared transport system, demand route information associated with one or more transport users, the demand route information including (i) location data associated with one or more transport user devices of the one or more transport users and (ii) one or more destinations of the one or more transport users entered via the one or more transport user devices; matching, by the shared transport system, at least one transport user of the one or more transport users to the transport provider based on the demand route information and the provider route information; determining, by the shared transport system, a pick-up location and a drop-off location of the at least one transport user based on the demand route information and the provider route information; and transmitting, by the shared transport system, transport instructions to the transport provider device, the transport instructions including an adjustment to the provider route information based on the determined pick-up location and drop-off location, wherein: the adjustment to the provider route information based on the determined pick-up location and drop-off location includes a deviation in the travel of the transport provider, and the matching Is further based on the deviation being below a predetermined deviation threshold.

Regarding claim 14, the prior art of record fails to teach or suggest alone, or in combination receiving, by the shared transport system, provider route information associated with travel of a transport provider, the provider route information based on a (i) destination of the transport provider entered via a transport provider device of the transport provider and (ii) location data associated with the transport provider device; receiving, by the shared transport system, demand route information associated with one or more transport users, the demand route information including (i) location data associated with one or more transport user devices of the one or more transport users and (ii) one or more destinations of the one or more transport users entered via the one or more transport user devices; matching, by the shared transport system, at least one transport user of the one or more transport users to the transport provider based on the demand route information and the provider route information, wherein matching the at least one transport user to the transport provider includes: matching the transport provider to a plurality of transport users; transmitting information associated with transport of the plurality of transport users to the transport provider device; and receiving a selection of the at least one transport user from the transport provider device; determining, by the shared transport system, a pick-up location and a drop-off location of the at least one transport user based on the demand route information and the provider route information; and transmitting, by the shared transport system, transport instructions to the transport provider device, the transport instructions including an adjustment to the provider route information based on the determined pick-up location and drop-off location.

Regarding claim 15, the prior art of record fails to teach or suggest alone, or in combination receiving, by the shared transport system, demand route information from a transport user device of a transport user, the demand route information including location data associated with the transport user

device and a destination of the transport user; receiving, by the shared transport system, provider route information associated with travel of one or more transport providers, the provider route information based on one or more destinations of the one or more transport providers entered via one or more transport provider devices of the one or more transport providers and location data associated with the one or more transport provider devices; matching, by the shared transport system, the transport user to one of the one or more transport providers based on the demand route information and the provider route information, wherein: the matching includes determining a deviation in the travel of the transport provider associated with the demand route information; and the matching Is further based on the deviation being below a predetermined deviation threshold; determining, by the shared transport system, a pick-up location and a drop-off location of the transport user based on the demand route information and the provider route information associated with the matched one of the one or more transport providers; and transmitting, by the shared transport system, transport instructions to the transport user device, the transport instructions including information indicative of the pick-up location, the drop-off location, and the matched one of the one or more transport providers.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEITH FERGUSON whose telephone number is (571)272-7865. The examiner can normally be reached M-F 7 am -3 pm.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wesley L Kim can be reached on (571) 272-7867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit: https://patentcenter.uspto.gov. Visit https://www.uspto.gov/patents/apply/patent-center for more information about Patent Center and https://www.uspto.gov/patents/docx for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KEITH FERGUSON/
Primary Examiner, Art Unit 2648

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/155,221	O'SULLIVAN, Sean
	Examiner	**Art Unit**
	KEITH FERGUSON	2648

CPC						
Symbol					**Type**	**Version**
G08G	/	1	/	123	F	2013-01-01
G06Q	/	10	/	00	I	2013-01-01
G06Q	/	10	/	025	I	2013-01-01
G06Q	/	50	/	30	I	2013-01-01
G06Q	/	10	/	063112	I	2013-01-01
G06Q	/	10	/	02	I	2013-01-01

CPC Combination Sets								
Symbol					**Type**	**Set**	**Ranking**	**Version**
	/		/					

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 20	
/KEITH FERGUSON/ Primary Examiner, Art Unit 2648 (Primary Examiner)	22 September 2022 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 2

U.S. Patent and Trademark Office

Part of Paper No.: 20220922

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/155,221	O'SULLIVAN, Sean
	Examiner	**Art Unit**
	KEITH FERGUSON	2648

INTERNATIONAL CLASSIFICATION				
CLAIMED				
G08G	/	1	/	123

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**

CROSS REFERENCES(S)						
CLASS	**SUBCLASS (ONE SUBCLASS PER BLOCK)**					

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 20	
/KEITH FERGUSON/ Primary Examiner, Art Unit 2648 (Primary Examiner)	22 September 2022 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 2

U.S. Patent and Trademark Office

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	Examiner	**Art Unit**
	KEITH FERGUSON	2648

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIMS

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1	7	10		19										
1	2	8	11		20										
2	3	9	12		21										
3	4	10	13	12	22										
4	5	11	14	13	23										
5	6	17	15	14	24										
	7	18	16	15	25										
6	8	19	17	16	26										
	9	20	18												

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	20	
/KEITH FERGUSON/ Primary Examiner, Art Unit 2648	22 September 2022	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	2

U.S. Patent and Trademark Office Part of Paper No.: 20220922

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
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	Examiner	**Art Unit**
	KEITH FERGUSON	2648

CPC - Searched*		
Symbol	**Date**	**Examiner**
G06Q50/30, G06Q10/00, G06Q10/02, G06Q10/025, G06Q10/06312	06/03/2022	KF

CPC Combination Sets - Searched*		
Symbol	**Date**	**Examiner**

US Classification - Searched*			
Class	**Subclass**	**Date**	**Examiner**

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	**Date**	**Examiner**
search notes included	06/03/2022	KF
inventor search	06/03/2022	KF
search notes included	09/22/2022	KF
interference search	09/22/2022	KF

Interference Search			
US Class/CPC Symbol	**US Subclass/CPC Group**	**Date**	**Examiner**
G06Q	G06Q50/30, G06Q10/00, G06Q10/02, G06Q10/025 , G06Q10/06312	09/22/2022	KF

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-22)
Approved for use through 05/31/2024. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17155221
	Filing Date	2021-01-22
	First Named Inventor	O'SULLIVAN, Sean
	Art Unit	2648
	Examiner Name	FERGUSON, Keith
	Attorney Docket Number	00199-0001-24000

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	9111315	B2	2015-08-18	MITCHELL, Clyde	
	2	10325228	B2	2019-06-18	KHAN, Bilal W.	
	3	11263904	B2	2022-03-01	O'SULLIVAN, Sean	
	4	11308803	B2	2022-04-19	O'SULLIVAN, Sean	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20220135002	A1	2022-05-05	Hassani, et al.	

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /K.F/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Art Unit	2648
	Examiner Name	FERGUSON, Keith
	Attorney Docket Number	00199-0001-24000

	1							

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NON-PATENT LITERATURE DOCUMENTS Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1		

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EXAMINER SIGNATURE

Examiner Signature	/KEITH FERGUSON/	Date Considered	09/22/2022

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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	Art Unit	2648
	Examiner Name	FERGUSON, Keith
	Attorney Docket Number	00199-0001-24000

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

X The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Joel S. Simon/	Date (YYYY-MM-DD)	2022-09-06
Name/Print	Joel Simon	Registration Number	70271

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /K.F/

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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	First Named Inventor	Sean O'SULLIVAN
	Art Unit	
	Examiner Name	
	Attorney Docket Number	00199-0001-24000

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6363323	B1	2002-03-26	Jones	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20010037174	A1	2001-11-01	Dickerson	
	2	20020011940	A1	2002-01-31	Cappel	
	3	20020034292	A1	2002-03-21	Tuoriniemi et al.	
	4	20020135515	A1	2002-09-26	Rankin et al.	
	5	20030040944	A1	2003-02-27	Hileman	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /K.F/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	
	Filing Date	
	First Named Inventor	Sean O'SULLIVAN
	Art Unit	
	Examiner Name	
	Attorney Docket Number	00199-0001-24000

	6	20040049424	A1	2004-03-11	Murray et al.	
	7	20040106399	A1	2004-06-03	Ki	
	8	20040124977	A1	2004-07-01	Biffar	
	9	20050172148	A1	2005-08-04	Ying	
	10	20070135078	A1	2007-06-14	Ljung	
	11	20070179792	A1	2007-08-02	Kramer	
	12	20080270019	A1	2008-10-30	Anderson et al.	
	13	20080277183	A1	2008-11-13	Huang et al.	
	14	20040243430	A1	2004-12-02	Horstemeyer	
	15	20060010037	A1	2006-01-12	Angert et al.	
	16	20080125967	A1	2008-05-29	SPRIGG	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /K.F/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Art Unit	
	Examiner Name	
	Attorney Docket Number	00199-0001-24000

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2]	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	02073546	WO	A2	2002-09-19	Andersen et al.		
	2	2003036498	JP	A	2003-02-07	Muramatsu, Haruji		

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	CHI-CHUNG TAO, "Dynamic Taxi-sharing Service Using Intelligent Transportation System Technologies," 2007, IEEE, 007 International Conference on Wireless Communications, Networking and Mobile Computing Wireless Communications, Networking and Mobile Computing, pp. 3209-3212.	

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EXAMINER SIGNATURE

Examiner Signature	/KEITH FERGUSON/	Date Considered	09/22/2022

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /K.F/

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	First Named Inventor	Sean O'SULLIVAN
	Art Unit	
	Examiner Name	
	Attorney Docket Number	00199-0001-24000

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

X A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Joel S. Simon/	Date (YYYY-MM-DD)	2021-01-22
Name/Print	Joel S. Simon	Registration Number	70271

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /K.F/

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /K.F/

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	2	("20040158483").pn.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/16 02:41 PM
L2	1	("20040158483").pn. AND route AND pick-up	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/16 02:41 PM
L3	5	("4360875").pn.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/16 02:57 PM
L4	2	("20040158483").pn.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU,	OR	ON	ON	2022/05/20 02:14 PM

			CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L5	2	("20040158483").pn.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/23 08:49 AM
L6	1	("20040158483").pn. AND code	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/23 08:49 AM
L7	2	("20040158483").pn.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA,	OR	ON	ON	2022/05/26 12:30 PM

			VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L8	1	("20040158483").pn. AND personal ADJ code	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/26 12:30 PM
L9	5	("4360875").pn.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/26 12:34 PM
L10	1	("4360875").pn. AND driver SAME (location$3 OR position$3)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/26 12:35 PM
L11	27629	(different OR another OR second) NEAR (pick-up OR pick ADJ up OR drop-off OR drop ADJ off)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB,	OR	ON	ON	2022/05/27 09:34 AM

			HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L12	432298	(ride NEAR shar$3 OR ride-shar$3 OR taxi OR uber OR lyft OR transport$6) SAME route	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/27 09:37 AM
L13	18538	match$3 WITH driver WITH (passenger OR customer OR person$3 OR client)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/27 09:38 AM
L14	50	L11 AND L12 AND L13	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2022/05/27 09:38 AM

			IBM_TDB)				
L15	1472	L12 AND I13	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/27 09:39 AM
L16	610	L15 AND ((G08G1/123 OR G06Q10/00 OR G06Q10/02 OR G06Q10/025 OR G06Q10/063112 OR G06Q50/30).cpc. OR (G08G1/123 OR G06Q10/00 OR G06Q50/30 OR G06Q10/02).ipc.)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/27 09:59 AM
L17	36	L11 AND L16	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/27 09:59 AM
L18	1668	L11 AND L12	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV,	OR	ON	ON	2022/05/27 10:12 AM

			MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L19	374396	L18AND ((G08G1/123 OR G06Q10/00 OR G06Q10/02 OR G06Q10/025 OR G06Q10/063112 OR G06Q50/30).cpc. OR (G08G1/123 OR G06Q10/00 OR G06Q50/30 OR G06Q10/02).ipc.)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/27 10:12 AM
L20	188	(different OR another OR second) NEAR (pick-up OR pick ADJ up OR drop-off OR drop ADJ off) SAME (transmit$3 OR send$3) SAME driver	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/27 10:13 AM
L21	107	(different OR another OR second) ADJ (pick-up OR pick ADJ up OR drop-off OR drop ADJ off) SAME (transmit$3 OR send$3) SAME driver	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/27 10:18 AM
L22	2398	(different OR another	(US-PGPUB; USPAT;	OR	ON	ON	2022/06/02

		OR second OR alternat$3) NEAR (pick-up OR pick ADJ up) SAME (transmit$3 OR send$3)	USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				02:09 PM
L23	1109	(ride-shar$3 OR taxi OR transportation OR uber OR lyft OR rid$3 OR transport$) AND L22	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/02 02:11 PM
L24	162	L23 AND ((G06Q50/30 OR G06Q10/00 OR G06Q10/02 OR G06Q10/025 OR G06Q10/06312).cpc. OR (G06Q50/30 OR G06Q10/02 OR G06Q10/00).ipc.)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/02 02:13 PM
L25	4	("20030040944").pn.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO,	OR	ON	ON	2022/06/02 02:23 PM

			NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L26	0	("200300040944").pn.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/02 02:24 PM
L27	4	("20030040944").pn.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/02 02:26 PM
L28	1	("20030040944").pn. AND (display$3 OR view$3)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/02 05:02 PM
L29	168302	(device OR terminal OR user OR ue) WITH select$3 WITH	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY,	OR	ON	ON	2022/06/03 12:22 PM

		(provider OR taxi OR vehicle OR uber) SAME display$3	CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L30	42	L24 AND L29	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 12:23 PM
L31	8016	L29 AND ((G06Q50/30 OR G06Q10/00 OR G06Q10/02 OR G06Q10/025 OR G06Q10/06312).cpc. OR (G06Q50/30 OR G06Q10/02 OR G06Q10/00).ipc.)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 12:24 PM
L32	47768	passenger WITH select$3 WITH (transport$ NEAR provider OR taxi OR vehicle OR uber)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH,	OR	ON	ON	2022/06/03 12:31 PM

			TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L33	3371	L32 AND ((G06Q50/30 OR G06Q10/00 OR G06Q10/02 OR G06Q10/025 OR G06Q10/06312).cpc. OR (G06Q50/30 OR G06Q10/02 OR G06Q10/00).ipc.)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 12:32 PM
L34	983	(transport$ OR ride OR ride-shar$3).ab. AND L33	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 12:33 PM
L35	751	route AND L34	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 12:33 PM
L36	169	passenger WITH select$3 WITH (transport$ NEAR provider OR taxi OR vehicle OR uber) SAME	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,	OR	ON	ON	2022/06/03 12:33 PM

		display$3 AND L35	EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L37	6481	confirm$ SAME (pick-up OR pickup OR pick ADJ up) SAME (drop ADJ off OR dropoff OR destination)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 12:47 PM
L38	117	L34 AND l37	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 12:48 PM
L39	2743	confirm$ WITH (pick-up OR pickup OR pick ADJ up) AND confirm$ WITH (drop ADJ off OR dropoff OR destination)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO;	OR	ON	ON	2022/06/03 12:50 PM

			JPO; DERWENT; IBM_TDB)				
L40	670	L39 AND ((G06Q50/30 OR G06Q10/00 OR G06Q10/02 OR G06Q10/025 OR G06Q10/06312).cpc. OR (G06Q50/30 OR G06Q10/02 OR G06Q10/00).ipc.)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 12:50 PM
L41	337	(transport$ OR ride OR ride-shar$3).ab. AND L40	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 12:51 PM
L42	2	("20040158483").pn.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 01:18 PM
L43	0	("20040158483").pn. AND display$	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS,	OR	ON	ON	2022/06/03 01:18 PM

			IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L44	5	("4360875").pn.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 01:19 PM
L45	1	("4360875").pn. AND display$3	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 01:19 PM
L46	4939	(transport$ NEAR vehicle OR driver) WITH (select$4 OR choos$3) near2 (rider OR passenger)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 02:04 PM

L47	10	L41 AND L46	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 02:05 PM
L48	813	L46 AND ((G06Q50/30 OR G06Q10/00 OR G06Q10/02 OR G06Q10/025 OR G06Q10/06312).cpc. OR (G06Q50/30 OR G06Q10/02 OR G06Q10/00).ipc.)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 02:05 PM
L49	270	L13 AND L48	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 02:06 PM
L50	3461	(transport$ NEAR vehicle OR driver) near3 (select$4 OR choos$3) near2 (rider OR passenger)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL,	OR	ON	ON	2022/06/03 02:09 PM

			NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L51	492	(transport$ OR ride OR ride-shar$3).ab. AND L50	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 02:09 PM
L52	0	("2003004090944").pn.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 02:50 PM
L53	0	("2003004090944").pn. AND SELECT$	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 02:50 PM
L54	10054	(select$3 OR choos$3) near2 (transport$ NEAR	(US-PGPUB; USPAT; USOCR; FIT (AP, AT,	OR	ON	ON	2022/06/03 03:43 PM

		vehicle OR driver OR taxi) near3 (select$4 OR choos$3) SAME (list$3 OR menu) WITH (transport$ NEAR vehicle OR driver OR taxi)	AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L55	1051	(passenger OR rider) SAME (transport$ NEAR vehicle OR driver OR taxi) near3 (select$4 OR choos$3) SAME (list$3 OR menu) WITH (transport$ NEAR vehicle OR driver OR taxi)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 03:44 PM
L56	843	L54 AND L55	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 03:44 PM
L57	10286	match$ WITH (passenger OR rider) WITH (transport$ NEAR vehicle OR driver OR taxi)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE,	OR	ON	ON	2022/06/03 03:45 PM

			SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L58	183	L56 AND L57	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 03:45 PM
L59	393	(vehicle OR driver OR taxi OR car-pool) WITH (select$3 OR choos$3) near1 (rider OR passenger) WITH (list$3 OR menu)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 04:19 PM
L60	51	L57 AND L59	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 04:20 PM
L61	2	sean.in. AND L48	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU,	OR	ON	ON	2022/06/03 05:20 PM

			CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L62	1047	sean.in. AND L19	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 05:21 PM
L63	342	o'sullivan.in. AND L19	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 05:21 PM
L64	69	L62 AND l63	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA,	OR	ON	ON	2022/06/03 05:21 PM

			VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L65	3	("20210142669").pn.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/22 01:18 PM
L66	146148	(transport$ NEAR vehicle OR driver OR vehicle) WITH (select$4 OR choos$3) near2 (rider OR passenger OR customer OR consumer OR shopper OR user)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/22 01:28 PM
L67	89	L24 AND L66	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/22 01:30 PM
L68	266	(re-rout$3 OR rerout$3 OR deviat$ OR alternat$) NEAR (rout$3 OR direction) SAME (pickup OR pick ADJ up) SAME (drop-off OR	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB,	OR	ON	ON	2022/09/22 01:34 PM

		drop ADJ off)	HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L69	29	L67 AND L68	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/22 01:34 PM
L70	1	N1 AND N2	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/22 01:39 PM

PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N1	12	shar$ WITH transportat$3 WITH rout$3 WITH travel$3.clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/22 01:38 PM
N2	47	demand$3 WITH rout$3 WITH user WITH location$3.clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/22 01:39 PM
N3	1	N1 AND N2	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/22 01:39 PM

PATENT
Customer No. 108449
Attorney Docket No. 00199-0001-24000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
Sean O'SULLIVAN et al.	)	Group Art Unit: 2648
	)	
Application No.: 17/155,221	)	Examiner: Keith FERGUSON
	)	
Filed: January 22, 2021	)	Confirmation No.: 5591
	)	
For: SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE	)	***VIA EFS WEB***

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

REPLY TO OFFICE ACTION

In reply to the Office Action mailed June 8, 2022, the period for response to which extends through September 8, 2022, please amend this application as follows:

Amendments to the Specification begin on page 2 of this Reply.

Amendments to the Claims are reflected in the listing of claims beginning on page 3 of this Reply.

Remarks follow the claim amendments section of this Reply.

Attachment: Information Disclosure Statement

AMENDMENTS TO THE SPECIFICATION:

Please insert the heading -- Related Applications -- before the first paragraph on page 1 of the Specification.

Please insert the heading -- Background -- before the second paragraph on page 1 of the Specification.

Please insert the heading -- Summary -- before the third paragraph on page 1 of the Specification.

Please insert the heading -- Brief Description of the Drawings -- before the first paragraph on page 9 of the Specification.

Please insert the heading -- Detailed Description -- before the third paragraph on page 13 of the Specification.

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Cancelled)

2. (Currently Amended) A method of sharing transportation employing a shared transport system, the method comprising:

receiving, by the shared transport system, provider route information associated with travel of a transport provider, the provider route information based on a (i) destination of the transport provider entered via a transport provider device of the transport provider and (ii) location data associated with the transport provider device;

receiving, by the shared transport system, demand route information associated with one or more transport users, the demand route information including (i) location data associated with one or more transport user devices of the one or more transport users and (ii) one or more destinations of the one or more transport users entered via the one or more transport user devices;

matching, by the shared transport system, at least one transport user of the one or more transport users to the transport provider based on the demand route information and the provider route information;

determining, by the shared transport system, a pick-up location and a drop-off location of the at least one transport user based on the demand route information and the provider route information; and

transmitting, by the shared transport system, transport instructions to the transport provider device, the transport instructions including an adjustment to the provider route information based on the determined pick-up location and drop-off location, wherein:

the adjustment to the provider route information based on the determined pick-up location and drop-off location includes a deviation in the travel of the transport provider; and

the matching is further based on the deviation being below a predetermined deviation threshold.

3. (Previously Presented) The method of claim 2, wherein:

the pick-up location is different from a location of the transport user device of the at least one transport user; and

the method further comprises transmitting, by the shared transport system, travel instructions to the transport user device of the at least one transport user, the travel instructions indicative of a route from the location of the transport user device to the pick-up location.

4. (Previously Presented) The method of claim 2, wherein:

the drop-off location is different from a location of the destination of the at least one transport user; and

the method further comprises transmitting, by the shared transport system, travel instructions to the transport user device of the at least one transport user, the travel instructions indicative of a route from the drop-off location to the location of the destination.

5. (Previously Presented) The method of claim 2, further comprising:

receiving, by the shared transport system, an indication that the at least one transport user has been picked up by the transport provider.

6. (Previously Presented) The method of claim 2, further comprising:

receiving, by the shared transport system, an indication that the at least one transport user has been dropped off by the transport provider.

7. (Cancelled)

8. (Previously Presented) The method of claim 2, further comprising:

in response to receiving the provider route information, registering a shared transport capacity of the transport provider with the shared transport system based on the provider route information.

9. (Cancelled)

10. (Previously Presented) The method of claim 2, wherein the transport instructions are configured to cause the transport provider device to display the adjustment to the provider route information.

11. (Previously Presented) The method of claim 2, wherein matching the at least one transport user to the transport provider includes:

determining a representation of the provider route information as a first plurality of coordinates;

determining a representation of the demand route information as a second plurality of coordinates; and

comparing the first plurality of coordinates to the second plurality of coordinates.

12. (Previously Presented) The method of claim 2, wherein matching the at least one transport user to the transport provider includes:

determining a demand route of the at least one transport user based on the location data associated with the transport user device of the at least one transport user and the destination of the at least one transport user; and

determining a provider route of the transport provider based on the location data associated with the transport provider device and the destination of the transport provider; and

comparing the demand route of the at least one transport user with the provider route of the transport provider.

13. (Previously Presented) The method of claim 2, wherein matching the at least one transport user to the transport provider includes determining, based on the demand route information and the provider route information, that the pick-up location and the drop-off location are within a predetermined proximity to the travel of the transport provider.

14. (Currently Amended) ~~The method of claim 2,~~ A method of sharing transportation employing a shared transport system, the method comprising:

receiving, by the shared transport system, provider route information associated with travel of a transport provider, the provider route information based on a (i) destination of the transport provider entered via a transport provider device of the transport provider and (ii) location data associated with the transport provider device;

receiving, by the shared transport system, demand route information associated with one or more transport users, the demand route information including (i) location data associated with one or more transport user devices of the one or more transport users and (ii) one or more destinations of the one or more transport users entered via the one or more transport user devices;

matching, by the shared transport system, at least one transport user of the one or more transport users to the transport provider based on the demand route

information and the provider route information, wherein matching the at least one transport user to the transport provider includes:

matching the transport provider to a plurality of transport users;

transmitting information associated with transport of the plurality of transport users to the transport provider device; and

receiving a selection of the at least one transport user from the transport provider device;

determining, by the shared transport system, a pick-up location and a drop-off location of the at least one transport user based on the demand route information and the provider route information; and

transmitting, by the shared transport system, transport instructions to the transport provider device, the transport instructions including an adjustment to the provider route information based on the determined pick-up location and drop-off location.

15. (Currently Amended) A method of sharing transportation employing a shared transport system, the method comprising:

receiving, by the shared transport system, demand route information from a transport user device of a transport user, the demand route information including location data associated with the transport user device and a destination of the transport user;

receiving, by the shared transport system, provider route information associated with travel of one or more transport providers, the provider route information based on

one or more destinations of the one or more transport providers entered via one or more transport provider devices of the one or more transport providers and location data associated with the one or more transport provider devices;

matching, by the shared transport system, the transport user to one of the one or more transport providers based on the demand route information and the provider route information, wherein:

the matching includes determining a deviation in the travel of the transport provider associated with the demand route information; and

the matching is further based on the deviation being below a predetermined deviation threshold;

determining, by the shared transport system, a pick-up location and a drop-off location of the transport user based on the demand route information and the provider route information associated with the matched one of the one or more transport providers; and

transmitting, by the shared transport system, transport instructions to the transport user device, the transport instructions including information indicative of the pick-up location, the drop-off location, and the matched one of the one or more transport providers.

16. (Previously Presented) The method of claim 15, wherein matching the transport user to the one of the one or more transport providers includes:

matching the transport user to a plurality of transport providers;

transmitting information associated with travel of the plurality of transport providers to the transport user device; and

receiving a selection of the one of the plurality of transport providers from the transport user device.

17. (Previously Presented) The method of claim 15, wherein:

the pick-up location is different from a location of the transport user; and

the method further comprises transmitting travel instructions to the transport user device, the travel instructions indicative of a route from the location of the transport user device to the pick-up location.

18. (Previously Presented) The method of claim 15, wherein:

the drop-off location is different from a location of the destination of the transport user; and

the method further comprises transmitting travel instructions to the transport user device, the travel instructions indicative of a route from the drop-off location to the location of the destination.

19-21. (Cancelled)

22. (New) The method of claim 14, wherein:

the pick-up location is different from a location of the transport user device of the at least one transport user; and

the method further comprises transmitting, by the shared transport system, travel instructions to the transport user device of the at least one transport user, the travel instructions indicative of a route from the location of the transport user device to the pick-up location.

23. (New) The method of claim 14, wherein:

the drop-off location is different from a location of the destination of the at least one transport user; and

the method further comprises transmitting, by the shared transport system, travel instructions to the transport user device of the at least one transport user, the travel instructions indicative of a route from the drop-off location to the location of the destination.

24. (New) The method of claim 14, further comprising:

receiving, by the shared transport system, an indication that the at least one transport user has been picked up by the transport provider.

25. (New) The method of claim 14, further comprising:

receiving, by the shared transport system, an indication that the at least one transport user has been dropped off by the transport provider.

26. (New) The method of claim 14, wherein:

the adjustment to the provider route information based on the determined pick-up location and drop-off location includes a deviation in the travel of the transport provider; and

the matching is further based on the deviation being below a predetermined deviation threshold.

REMARKS

Applicant submits this Reply in response to the Office Action mailed June 8, 2022.

I. Status of the Claims

By this Reply, Applicant cancels claims 7, 9, and 19-21, amends claims 2, 14, and 15, and adds new claims 22-26. The originally filed specification and drawings fully support the subject matter of the amended and new claims. Claims 2-6, 8, 10-18, and 22-26 are pending in this application, of which claims 2, 14, and 15 are in independent form. Applicant thanks the examiner for the indication of allowable subject matter in claims 9 and 14.

II. Objection to the Specification

In the Office Action, the specification was objected to for minor informalities. These informalities have been corrected by this Reply. Reconsideration of these specification objections is requested.

III. Allowable Subject Matter

In the Office Action, dependent claim 9 was indicated as containing allowable subject matter. By this Reply, Applicant has incorporated this allowable subject matter into independent claims 2 and 15, and has canceled claims 7 and 9 accordingly. Based on this, Applicant submits that claims 2 and 15 are now allowable. Claims 3-6, 8, 10-13, and 15-18 depend from claims 2 and 15, and thus are allowable for at least the same reason as their respective base claims.

In the Office Action, dependent claim 14 was indicated as containing allowable subject matter. Claim 14 has been rewritten into independent form. In view of this, Applicant requests the allowance of independent claim 14.

IV. New Claims

New claims 22-26 depend from independent claim 14, and thus are allowable for at least the reasons provided above with respect to independent claim 14.

V. Conclusion

The Office Action contains characterization of the claims and the related art with which the Applicant does not necessarily agree. Unless expressly noted otherwise, Applicant declines to subscribe to any statement or characterization in the Office Action.

In discussing the specification, claims, and drawings in this Reply, it is to be understood that Applicant is in no way intending to limit the scope of the claims to any exemplary embodiments described in the specification or abstract and/or shown in the drawings. Rather, Applicant is entitled to have the claims interpreted broadly to the maximum extent permitted by statute, regulation, and applicable case law.

In view of the foregoing remarks, Applicant submits that this claimed invention is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicant therefore requests the reconsideration and reexamination of the application, and the timely allowance of the pending claims.

If the Examiner believes a telephone conversation might advance prosecution, the Examiner is invited to call Applicant's undersigned representative at (202) 808-3560.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account No. 50-5906. In addition, the

Commissioner is hereby authorized to charge any additional fees due and any other fees due under 37 C.F.R. § 1.16 or § 1.17 during the pendency of this application to Deposit Account No. 50-5906.

Respectfully submitted,

BOOKOFF McANDREWS, PLLC
Customer Number: 108449

Dated: September 6, 2022

By: /Joel S. Simon/
Joel S. Simon
Reg. No. 70271
(202) 808-3560

PTO/SB/08a (01-22)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17155221
Filing Date	2021-01-22
First Named Inventor	O'SULLIVAN, Sean
Art Unit	2648
Examiner Name	FERGUSON, Keith
Attorney Docket Number	00199-0001-24000

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	9111315	B2	2015-08-18	MITCHELL, Clyde	
	2	10325228	B2	2019-06-18	KHAN, Bilal W.	
	3	11263904	B2	2022-03-01	O'SULLIVAN, Sean	
	4	11308803	B2	2022-04-19	O'SULLIVAN, Sean	

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	1	20220135002	A1	2022-05-05	Hassani, et al.	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	17155221
	Filing Date	2021-01-22
	First Named Inventor	O'SULLIVAN, Sean
	Art Unit	2648
	Examiner Name	FERGUSON, Keith
	Attorney Docket Number	00199-0001-24000

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Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	17155221
	Filing Date	2021-01-22
	First Named Inventor	O'SULLIVAN, Sean
	Art Unit	2648
	Examiner Name	FERGUSON, Keith
	Attorney Docket Number	00199-0001-24000

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Joel S. Simon/	Date (YYYY-MM-DD)	2022-09-06
Name/Print	Joel Simon	Registration Number	70271

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The information provided by you in this form will be subject to the following routine uses:

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2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

UNITED STATES
PATENT AND TRADEMARK OFFICE

P.O. Box 1450
Alexandria, VA 22313 - 1450
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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/155,221	**09/06/2022 02:11:40 PM ET**	**00199-0001-24000**

Title of Invention

SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	5591	FILED BY	Jeovany Cantillano
PATENT CENTER #	60940435	FILING DATE	01/22/2021
CUSTOMER #	108449	FIRST NAMED INVENTOR	Sean O'SULLIVAN
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	Joel Simon

Documents

TOTAL DOCUMENTS: 5

DOCUMENT		PAGES	DESCRIPTION	SIZE (KB)
Reply_NFOA.pdf		15	-	109 KB
Reply_NFOA-A....pdf	(1-1)	1	Amendment/Request for Reconsideration-After Non-Final Rejection	87 KB
Reply_NFOA-SPEC.pdf	(2-2)	1	Specification	62 KB
Reply_NFOA-CLM.pdf	(3-12)	10	Claims	74 KB
Reply_NFOA-REM.pdf	(13-15)	3	Applicant Arguments/Remarks Made in an Amendment	66 KB

SB08.pdf	4	Information Disclosure Statement (IDS) Form (SB08)	1252 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
Reply_NFOA.pdf	15F4FE22A7ABB8C3923E97824354843C560759A6773F1C4379C83CAAC060B946266BC94210155FC545310FE183A6EFC8208E3F2EF72CEB87C93D469E2879FB39
Reply_NFOA-A....pdf	728895BAD722F9D610387AB68E0A8253128DF7C19D21C764B3D5C9DEF79D5BF75AA4C1804EA76603698848D3C923F14A905E731285B000E8E4FA6E858CFA9124
Reply_NFOA-SPEC.pdf	8920FAA750EBDD06041EE92CD4E3EA5F549D61226435EED36AE9CBB4EDBC307D66AF3E4F2FD9CD7988D1D65BB8E1F9583381F35417F616A2A82A65F119D15316
Reply_NFOA-CLM.pdf	CE17457D77B09D208E779EAA0BB977190AA9665A4E5791484F378EB230EC1C15B4736859A045AAEFB26407EF82E05B17DA2EC5BBFF0216F8A735D03F8BD553B0
Reply_NFOA-REM.pdf	FF8B9D7CFCA2AD8C14BA8DB20BCD48783EB39F8707955A349A937E47A98098426B06B93E244B602E2276207BDA149F6D8E8EAAE12C5EE2CE3D82637FC3FD5591
SB08.pdf	3096CE5AFD70A57E85852E7C6B313140279C52D089D9D4DC9A4A4393B5BF36A53C0F7BF47FC3198EFC344B8DD2B003063336011EC2F497019EFAAAC077F62ED3

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/155,221	09/06/2022 02:11:40 PM ET	00199-0001-24000

Title of Invention

SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE

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CUSTOMER #	108449	FILING DATE	01/22/2021
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Sean O'SULLIVAN

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
CARD / 1006	E202296E12552572	Jeovany Cantillano

FEE CODE	DESCRIPTION	ITEM PRICE($)	QUANTITY	ITEM TOTAL($)
2806	SUBMISSION OF AN INFORMATION DISCLOSURE STATEMENT	130.00	1	130.00
			TOTAL AMOUNT:	$130.00

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New Applications Under 35 U.S.C. 111

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PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 17/155,221	Filing Date 01/22/2021	☐ To be Mailed

ENTITY: ☐ LARGE ☑ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $50 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $240 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

AMENDMENT	09/06/2022	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0		x $50 =	0
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0		x $240 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.	LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/VINCENT S BUTLER/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/155,221	01/22/2021	Sean O'SULLIVAN	00199-0001-24000	5591

108449 7590 06/08/2022
Bookoff McAndrews, PLLC
2020 K Street NW
Suite 400
Washington, DC 20006

EXAMINER
FERGUSON, KEITH

ART UNIT	PAPER NUMBER
2648	

NOTIFICATION DATE	DELIVERY MODE
06/08/2022	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

KRoss@bomcip.com
eofficeaction@appcoll.com
usptomail@bomcip.com

PTOL-90A (Rev. 04/07)

Office Action Summary	Application No. 17/155,221	Applicant(s) O'SULLIVAN, Sean	
	Examiner KEITH FERGUSON	Art Unit 2648	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☑ Responsive to communication(s) filed on 1/22/2021.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL.** 2b) ☑ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 1-21 is/are pending in the application.

5a) Of the above claim(s) 1 is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 2-8,10-13 and 15-21 is/are rejected.

8) ☑ Claim(s) 9 and 14 is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

Application Papers

10)☑ The specification is objected to by the Examiner.

11)☑ The drawing(s) filed on See Continuation Sheet is/are: a)☑ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☑ Notice of References Cited (PTO-892)

2) ☑ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

Continuation of Application Papers 11): 1/22/2021

DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application is being examined under the pre-AIA first to invent provisions.

Drawings

The drawings were received on 1/22/ 2021. These drawings are accepted.

Specification

The disclosure is objected to because of the following informalities: Section with the specification is missing headings. For example, header information such as "BRIEF SUMMARY OF THE INVENTION, BRIEF DESCRIPTION OF THE DRAWINGS, DETAIL DESTRIPTION OF THE EMBODIMENT" are missing from the specification.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

3. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 2, 7,8,10-13, 19 and 21 is/are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Lecouturier (US 2004/0158483) in view of Behnke (US 4,360,875), applicant IDS.

Regarding claims 2 and 8, Lecouturier discloses a method (schematic exemplary architecture) (fig. 1) of sharing transportation employing a shared transport system (P:0080), the method comprising: receiving, by the shared transport system (driver and/or independent company)(P:0082 and P:0127), provider route information (each driver upon joining the system is registered in the system database according to a place of departure and place of destination. A satellite tracking system tracks the position of every vehicle and monitors their routs) (P:0126) associated with travel of a transport provider (driver)(P:0126-P:027), the provider route information based on a destination of the transport provider entered via a transport provider device (i.e. the driver telephones or calls the system, inherent to be a telephone device) (P:0082 and P:0127) of the transport provider (P:0082 and P:0127) and (ii) location data (GPS Data) associated with the transport provider device (P:0083 and P:0134); receiving, by the shared transport system (P:0130-P:0131), demand route information associated with one or more transport users (passengers) (P:0130-P:0131), the demand route information including (i) location data (origin and destination) associated with one or more transport user devices of the one or more transport users (P:0130-P:0131) and (ii) one or more destinations of the one or more transport users entered via the one or more transport user devices (passengers calls minutes before the contemplated time of departure, i.e., inherent as a telephonic device or telephone terminal)(P:0131 and 0134); matching (P:0134), by the shared transport system (P:0134), at least one transport user (passenger) of the one or more transport users (passengers) to the transport (provider driver) based on the demand route information and the provider route information (P:0135); determining, by the shared transport system, a pick-up location and a drop-off location (destination) of the at least one transport user based on the demand route information and the provider route information (P:0134-P:0135) ; means to direct at least one said driver on an optimum route to transport at least one of said passengers to said destination (claim 3, page 9 and 10) and by the shared transport system, transport instructions to the transport provider device, the transport instructions including an adjustment (new route)(P:0137) to the

provider route information based on the determined pick-up location and drop-off location (destination) (P:0134-P:0137). Lecouturier differs from claim 2 of the present invention in that it does not explicit disclose transmitting, by the shared transport system, transport instructions to the transport provider device. Behnke teaches a flexible route transportation system (abstract), where a central coordinating station transmits to the driver the riders location thereby instantly matching the rider with the ride sharing vehicle and enabling the driver to pick the rider (col. 3 lines 58-60). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lecouturier with transmitting, by the shared transport system, transport instructions to the transport provider device in order for the system to transmit a message to inform the driver of the new route to pick up the next passenger, as taught by Behnke.

Regarding claims 7 and 21, Lecouturier discloses a deviation (impediments) in the travel of the transport provider (P:0138).

Regarding claim 10, Lecouturier discloses a method as discussed supra in claim 2 above, (i.e. the shared transport system, transport instructions to the transport provider device, the transport instructions including an adjustment (new route)(P:0137) to the provider route information based on the determined pick-up location and drop-off location (destination) (P:0134-P:0137). Lecouturier differs from claim 10 of the present invention in that it does not explicit disclose the transport instructions are configured to cause the transport provider device to display the adjustment to the provider route information. Behnke teaches as soon as a rider has been matched with a driver, the computer transmits confirmation messages to the driver and, preferably, also to the rider (col. 10 lines 45-53). Since this is a point-to-point system, the driver should be informed at least as to the rider's location, and preferably also as to the rider's identification (col. 10 lines 45-53). The computer 14

therefore transmits this information to the driver's terminal which presents it visually on the display 22 (col. 10 lines 45-53). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lecouturier with the transport instructions are configured to cause the transport provider device to display the adjustment to the provider route information in order for the transport system to inform the driver the new route to be displayed in the vehicle of the route to take to pick up the passenger, as taught by Behnke.

Regarding claim 11, Lecouturier discloses determining a representation of the provider route information as a first plurality of coordinates (coded segments) (P:0081 and P:0135); determining a representation of the demand route information as a second plurality of coordinates (P:0135); and comparing the first plurality of coordinates to the second plurality of coordinates (P:0135).

Regarding claim 12, Lecouturier discloses determining a demand route of the at least one transport user based on the location data associated with the transport user device of the at least one transport user and the destination of the at least one transport user (P:0134-P:0135); and determining a provider route of the transport provider based on the location data associated with the transport provider device and the destination of the transport provider (P:0134-P:0135); and comparing (matching) the demand route of the at least one transport user with the provider route of the transport provider (P:0134-P:0135) .

Regarding claim 13, Lecouturier discloses determining, based on the demand route information and the provider route information, that the pick-up location and the drop-off location are within a predetermined proximity to the travel of the transport provider (P:0134-P:0135).

Regarding claims 19, Lecouturier discloses a share transport system (fig. 1, abstract and P:0080-P:0084) comprising: one or more processor (process) and memory (databases) storing instructions (fig. 1, abstract and P:0080-P:0084), receiving, by the shared transport system (driver and/or independent company)(P:0082 and P:0127), provider route information (each driver upon joining the system is registered in the system database according to a place of departure and place of destination. A satellite tracking system tracks the posituin of every vehicle and monitors their routs) (P:0126) associated with travel of a transport provider (driver)(P:0126-P:027), the provider route information based on a destination of the transport provider entered via a transport provider device (i.e. the driver telephones or calls the system, inherent to be a telephone device) (P:0082 and P:0127) of the transport provider (P:0082 and P:0127) and (ii) location data (GPS Data) associated with the transport provider device (P:0083 and P:0134); receiving, by the shared transport system (P:0130-P:0131), demand route information associated with one or more transport users (passengers) (P:0130-P:0131), the demand route information including (i) location data (origin and destination) associated with one or more transport user devices of the one or more transport users (P:0130-P:0131) and (ii) one or more destinations of the one or more transport users entered via the one or more transport user devices (passengers calls minutes before the contemplated time of departure, i.e., inherent as a telephonic device or telephone terminal)(P:0131 and 0134); matching (P:0134), by the shared transport system (P:0134), at least one transport user (passenger) of the one or more transport users (passengers) to the transport (provider driver) based on the demand route information and the provider route information (P:0135); determining, by the shared transport system, a pick-up location and a drop-off location (destination) of the at least one transport user based on the demand route information and the provider route information (P:0134-P:0135) ; means to direct at least one said driver on an optimum route to transport at least one of said passengers to said destination (claim 3, page 9 and 10) and by the shared

transport system, transport instructions to the transport provider device, the transport instructions including an adjustment (new route)(P:0137) to the provider route information based on the determined pick-up location and drop-off location (destination) (P:0134-P:0137). Lecouturier differs from claim 19 of the present invention in that it does not explicit disclose transmitting, by the shared transport system, transport instructions to the transport provider device. Behnke teaches a flexible route transportation system (abstract), where a central coordinating station transmits to the driver the riders location thereby instantly matching the rider with the ride sharing vehicle and enabling the driver to pick the rider (col. 3 lines 58-60). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lecouturier with transmitting, by the shared transport system, transport instructions to the transport provider device in order for the system to transmit a message to inform the driver of the new route to pick up the next passenger, as taught by Behnke.

5. Claims 3, 4 and 20 is/are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Lecouturier (US 2004/0158483) in view of Behnke (US 4,360,875) as applied to claims 2 and 19 above and in further view of Hileman (US 20030040944).

Regarding claims 3 and 4, the combination of Lecouturier and Behnke differs from claims 3 and 4 of the present invention in that they do not explicit disclose the pick-up location is different from a location of the transport user device of the at least one transport user; and the method further comprises transmitting, by the shared transport system, travel instructions to the transport user device of the at least one transport user, the travel instructions indicative of a route from the location of the transport user device to the pick-up location and the drop-off location is different from a location of the destination of the at least one transport user; and the method further comprises transmitting, by the shared transport system, travel instructions to the transport user device of the at least one transport user, the travel instructions indicative of a route from the drop-off location to the location of the

destination. Hileman teaches a transportation system (abstract) where a passenger origination location is different from a location of the transport user device (transporting vehicle cellular modem)(P:0025) of the at least one transport user (transport vehicle)(fig. 3 Block 300 and P:0029-P:0030 line 9) ; and the method further comprises transmitting, by the shared transport system, travel instructions to the transport user device of the at least one transport user (P:0035 and block 322), the travel instructions indicative of a route from the location of the transport user device to the pick-up location (P:0035) and a destination location is different from a location of the destination of the at least one transport user(fig. 3 Block 300 and P:0029-P:0030 line 9) ; and the method further comprises notifying by the shared transport system (P:0035), travel instructions to the transport user device of the at least one transport user (P:0035 and block 322), the travel instructions indicative of a route from the drop-off location to the location of the destination (P:0035). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Lecouturier and Behnke with the pick-up location is different from a location of the transport user device of the at least one transport user; and the method further comprises transmitting, by the shared transport system, travel instructions to the transport user device of the at least one transport user, the travel instructions indicative of a route from the location of the transport user device to the pick-up location and the drop-off location is different from a location of the destination of the at least one transport user; and the method further comprises transmitting, by the shared transport system, travel instructions to the transport user device of the at least one transport user, the travel instructions indicative of a route from the drop-off location to the location of the destination in order for the shared transport system to provide to the driver of the vehicle and passenger the optimal transportation routes to a pickup location and destination location based upon the passenger transportation request information, vehicle transportation information and the predicted traffic conditions, as taught by Hileman.

Regarding claim 20, the combination of Lecouturier and Behnke differs from claim 20 of the present invention in that they do not explicit disclose transmitting second transport instructions to the transport user device of the at least one transport user, the second transport instructions including information indicative of the pick-up location, the drop-off location, and the at least one transport provider. Hileman teaches sending second transport instructions (i.e. the server may send information in addition to only the optimal transportation routes)(P:0035 lines 1-7) to the transport user device of the at least one transport user, the second transport instructions including information indicative of the pick-up location, the drop-off location, and the at least one transport provider (P:0035). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Lecouturier and Behnke with transmitting second transport instructions to the transport user device of the at least one transport user, the second transport instructions including information indicative of the pick-up location, the drop-off location, and the at least one transport provider in order to allow the passenger to accept or decline the possible routes and transportation providers to the pick-up and drop-off location based upon the routes chosen by the system, as taught by Hileman.

6. Claims 5 and 6 is/are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Lecouturier (US 2004/0158483) in view of Behnke (US 4,360,875) as applied to claim 2 above and in further view of "Official Notice".

Regarding claims 5 and 6, the combination of Lecouturier and Behnke differs from claims 5 and 6 of the present invention in that they do not explicit disclose receiving, by the shared transport system, an indication that the at least one transport user has been picked up and dropped off by the transport provider. However, examiner takes "Official Notice" that receiving, by the shared transport system, an indication that the at least one transport user has been picked up and dropped off by the transport

provider is known in the art so that the transport system receives a confirmation from the transport provider the time and location when the passenger was pickup or dropped off.

7. Claim 15, 17 and 18 is/are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Lecouturier (US 2004/0158483) in view of Hileman (US 20030040944).

Regarding claim 15, Lecouturier discloses a method (schematic exemplary architecture) (fig. 1) of sharing transportation employing a shared transport system (P:0080), the method comprising: receiving, by the shared transport system (driver and/or independent company)(P:0082 and P:0127), provider route information (each driver upon joining the system is registered in the system database according to a place of departure and place of destination. A satellite tracking system tracks the posituin of every vehicle and monitors their routs) (P:0126) associated with travel of a transport provider (driver)(P:0126-P:027), the provider route information based on a destination of the transport provider entered via a transport provider device (i.e. the driver telephones or calls the system, inherent to be a telephone device) (P:0082 and P:0127) of the transport provider (P:0082 and P:0127) and (ii) location data (GPS Data) associated with the transport provider device (P:0083 and P:0134); receiving, by the shared transport system (P:0130-P:0131), demand route information associated with one or more transport users (passengers) (P:0130-P:0131), the demand route information including (i) location data (origin and destination) associated with one or more transport user devices of the one or more transport users (P:0130-P:0131) and (ii) one or more destinations of the one or more transport users entered via the one or more transport user devices (passengers calls minutes before the contemplated time of departure, i.e., inherent as a telephonic device or telephone terminal)(P:0131 and 0134); matching (P:0134), by the shared transport system (P:0134), at least one transport user (passenger) of the one or more transport users (passengers) to the transport (provider driver) based on the demand route information and the provider route information (P:0135); determining, by the shared transport

system, a pick-up location and a drop-off location (destination) of the at least one transport user based on the demand route information and the provider route information (P:0134-P:0135). Lecouturier differs from claim 15 of the present invention in that it does not explicit disclose transmitting, by the shared transport system, transport instructions to the transport user device, the transport instructions including information indicative of the pick-up location, the drop-off location, and the matched one of the one or more transport providers. Hileman teaches a transportation system (abstract), comprising transmitting, by the transport system, transport instructions to the transport user device (telephone 34 or wireless device 36, fig. 1) (P:0024 and P:0035), the transport instructions including information indicative of the pick-up location (origination), the drop-off location (destination) (P:0029), and the matched (notifies the transport vehicle to the user) one of the one or more transport providers (P:0029 and P:0035). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lecouturier with transmitting, by the shared transport system, transport instructions to the transport user device, the transport instructions including information indicative of the pick-up location, the drop-off location, and the matched one of the one or more transport providers in order for the share transport system to inform the passenger a confirm agreement to the passenger pickup location, destination and the vehicle use to pick up the passenger, as taught by Hileman.

Regarding claims 17 and 18, Lecouturier discloses a method as discussed supra in claim 15 above. Lecouturier differs from claims 17 and 18 of the present invention in that they do not explicit disclose the pick-up location is different from a location of the transport user device of the at least one transport user; and the method further comprises transmitting, by the shared transport system, travel instructions to the transport user device of the at least one transport user, the travel instructions indicative of a route from the location of the transport user device to the pick-up location and the the drop-off location is different from a location of the destination of the at least one transport user; and

the method further comprises transmitting, by the shared transport system, travel instructions to the transport user device of the at least one transport user, the travel instructions indicative of a route from the drop-off location to the location of the destination. Hileman teaches a transportation system (abstract) where a passenger origination location is different from a location of the transport user device (transporting vehicle cellular modem)(P:0025) of the at least one transport user (transport vehicle)(fig. 3 Block 300 and P:0029-P:0030 line 9) ; and the method further comprises transmitting, by the shared transport system, travel instructions to the transport user device of the at least one transport user (P:0035 and block 322), the travel instructions indicative of a route from the location of the transport user device to the pick-up location (P:0035) and a destination location is different from a location of the destination of the at least one transport user(fig. 3 Block 300 and P:0029-P:0030 line 9) ; and the method further comprises notifying by the shared transport system (P:0035), travel instructions to the transport user device of the at least one transport user (P:0035 and block 322), the travel instructions indicative of a route from the drop-off location to the location of the destination (P:0035). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Lecouturier and Behnke with the pick-up location is different from a location of the transport user device of the at least one transport user; and the method further comprises transmitting, by the shared transport system, travel instructions to the transport user device of the at least one transport user, the travel instructions indicative of a route from the location of the transport user device to the pick-up location and the drop-off location is different from a location of the destination of the at least one transport user; and the method further comprises transmitting, by the shared transport system, travel instructions to the transport user device of the at least one transport user, the travel instructions indicative of a route from the drop-off location to the location of the destination in order for the shared transport system to provide to the driver of the vehicle and passenger the optimal transportation routes to a pickup location and destination location based upon the passenger

transportation request information,, vehicle transportation information and the predicted traffic conditions, as taught by Hileman.

8. Claim 16 is/are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Lecouturier (US 2004/0158483) in view of Hileman (US 20030040944) as applied to claim 15 above and in further view of Giuseppe (GB2397683A).

Regarding claim 16, the combination of Lecouturier and Hileman differs from claim 16 of the present invention in that they do not explicit disclose receiving a selection of the one of the plurality of transport providers from the transport user device. Giuseppe teaches receiving a selection of car-pool devices from a passenger communication device (Page 45, section 7.5). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Lecouturier and Hileman with receiving a selection of the one of the plurality of transport providers from the transport user device in order for the transport system to determine if the transport vehicle declines the trip or route, whereby the passenger can then immediately select another transport vehicle in the list, as taught by Giuseppe.

Allowable Subject Matter

8. Claims 9 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 9, the prior art of record fails to teach or suggest alone, or in combination the matching is further based on the deviation being below a predetermined deviation threshold.

Regarding claim 14, the prior art of record fails to teach or suggest alone, or in combination matching the transport provider to a plurality of transport users; transmitting information associated with transport of the plurality of transport users to the transport provider device; and receiving a selection of the at least one transport user from the transport provider device.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEITH FERGUSON whose telephone number is (571)272-7865. The examiner can normally be reached M-F 7 am -3 pm.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wesley L Kim can be reached on (571) 272-7867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit: https://patentcenter.uspto.gov. Visit https://www.uspto.gov/patents/apply/patent-center for more information about Patent Center and https://www.uspto.gov/patents/docx for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KEITH FERGUSON/
Primary Examiner, Art Unit 2648

Notice of References Cited	Application/Control No. 17/155,221	Applicant(s)/Patent Under Reexamination O'SULLIVAN, Sean	
	Examiner KEITH FERGUSON	Art Unit 2648	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-20040158483-A1	08-2004	Lecouturier, Jacques M.	G06Q10/08	705/6
*	B	US-20030040944-A1	02-2003	Hileman, Ryan M.	G06Q10/08	705/5
	C					
	D					
	E					
	F					
	G					
	H					
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N	GB-2397683-A	07-200	GB	OLMI G A	G01C21/26
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/155,221	O'SULLIVAN, Sean
	Examiner	**Art Unit**
	KEITH FERGUSON	2648

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	06/03/2022								
	1	-								
	2	✓								
	3	✓								
	4	✓								
	5	✓								
	6	✓								
	7	✓								
	8	✓								
	9	O								
	10	✓								
	11	✓								
	12	✓								
	13	✓								
	14	O								
	15	✓								
	16	✓								
	17	✓								
	18	✓								
	19	✓								
	20	✓								
	21	✓								

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/155,221	O'SULLIVAN, Sean
	Examiner	**Art Unit**
	KEITH FERGUSON	2648

CPC - Searched*		
Symbol	**Date**	**Examiner**
G06Q50/30, G06Q10/00, G06Q10/02, G06Q10/025, G06Q10/06312	06/03/2022	KF

CPC Combination Sets - Searched*		
Symbol	**Date**	**Examiner**

US Classification - Searched*			
Class	**Subclass**	**Date**	**Examiner**

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	**Date**	**Examiner**
search notes included	06/03/2022	KF
inventor search	06/03/2022	KF

Interference Search			
US Class/CPC Symbol	**US Subclass/CPC Group**	**Date**	**Examiner**

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)
Approved for use through 11/30/2020. OMB 0651-0031
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17155221
	Filing Date	2021-01-22
	First Named Inventor	O'SULLIVAN; Sean
	Art Unit	2648
	Examiner Name	FERGUSON, KEITH
	Attorney Docket Number	00199-0001-24000

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6356838		2002-03-12	PAUL; Sunil	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20080262995		2008-10-23	ZWEIG; Geoffrey Gerson et al.	
	2	20140172727		2014-06-19	ABHYANKER; Raj V. et al.	

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	1	2002074119	JP	A	2002-03-15	URS KK.		X

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Receipt date: 11/22/2021

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17155221
	Filing Date	2021-01-22
	First Named Inventor	O'SULLIVAN; Sean
	Art Unit	2648
	Examiner Name	FERGUSON, KEITH
	Attorney Docket Number	00199-0001-24000

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	None	

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EXAMINER SIGNATURE

Examiner Signature	/KEITH FERGUSON/	Date Considered	06/03/2022

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Filing Date	2021-01-22
	First Named Inventor	O'SULLIVAN; Sean
	Art Unit	2648
	Examiner Name	FERGUSON, KEITH
	Attorney Docket Number	00199-0001-24000

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

X A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Joel S. Simon/	Date (YYYY-MM-DD)	2021-11-22
Name/Print	Joel S. Simon	Registration Number	70271

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	2	("20040158483").pn.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/16 02:41 PM
L2	1	("20040158483").pn. AND route AND pick-up	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/16 02:41 PM
L3	5	("4360875").pn.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/16 02:57 PM
L4	2	("20040158483").pn.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU,	OR	ON	ON	2022/05/20 02:14 PM

			CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L5	2	("20040158483").pn.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/23 08:49 AM
L6	1	("20040158483").pn. AND code	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/23 08:49 AM
L7	2	("20040158483").pn.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA,	OR	ON	ON	2022/05/26 12:30 PM

			VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L8	1	("20040158483").pn. AND personal ADJ code	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/26 12:30 PM
L9	5	("4360875").pn.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/26 12:34 PM
L10	1	("4360875").pn. AND driver SAME (location$3 OR position$3)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/26 12:35 PM
L11	27629	(different OR another OR second) NEAR (pick-up OR pick ADJ up OR drop-off OR drop ADJ off)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB,	OR	ON	ON	2022/05/27 09:34 AM

			HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L12	432298	(ride NEAR shar$3 OR ride-shar$3 OR taxi OR uber OR lyft OR transport$6) SAME route	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/27 09:37 AM
L13	18538	match$3 WITH driver WITH (passenger OR customer OR person$3 OR client)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/27 09:38 AM
L14	50	L11 AND L12 AND L13	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2022/05/27 09:38 AM

			IBM_TDB)				
L15	1472	L12 AND I13	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/27 09:39 AM
L16	610	L15 AND ((G08G1/123 OR G06Q10/00 OR G06Q10/02 OR G06Q10/025 OR G06Q10/063112 OR G06Q50/30).cpc. OR (G08G1/123 OR G06Q10/00 OR G06Q50/30 OR G06Q10/02).ipc.)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/27 09:59 AM
L17	36	L11 AND L16	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/27 09:59 AM
L18	1668	L11 AND L12	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV,	OR	ON	ON	2022/05/27 10:12 AM

			MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L19	374396	L18AND ((G08G1/123 OR G06Q10/00 OR G06Q10/02 OR G06Q10/025 OR G06Q10/063112 OR G06Q50/30).cpc. OR (G08G1/123 OR G06Q10/00 OR G06Q50/30 OR G06Q10/02).ipc.)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/27 10:12 AM
L20	188	(different OR another OR second) NEAR (pick-up OR pick ADJ up OR drop-off OR drop ADJ off) SAME (transmit$3 OR send$3) SAME driver	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/27 10:13 AM
L21	107	(different OR another OR second) ADJ (pick-up OR pick ADJ up OR drop-off OR drop ADJ off) SAME (transmit$3 OR send$3) SAME driver	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/27 10:18 AM
L22	2398	(different OR another	(US-PGPUB; USPAT;	OR	ON	ON	2022/06/02

		OR second OR alternat$3) NEAR (pick-up OR pick ADJ up) SAME (transmit$3 OR send$3)	USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				02:09 PM
L23	1109	(ride-shar$3 OR taxi OR transportation OR uber OR lyft OR rid$3 OR transport$) AND L22	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/02 02:11 PM
L24	162	L23 AND ((G06Q50/30 OR G06Q10/00 OR G06Q10/02 OR G06Q10/025 OR G06Q10/06312).cpc. OR (G06Q50/30 OR G06Q10/02 OR G06Q10/00).ipc.)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/02 02:13 PM
L25	4	("20030040944").pn.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO,	OR	ON	ON	2022/06/02 02:23 PM

			NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L26	0	("200300040944").pn.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/02 02:24 PM
L27	4	("20030040944").pn.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/02 02:26 PM
L28	1	("20030040944").pn. AND (display$3 OR view$3)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/02 05:02 PM
L29	168302	(device OR terminal OR user OR ue) WITH select$3 WITH	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY,	OR	ON	ON	2022/06/03 12:22 PM

		(provider OR taxi OR vehicle OR uber) SAME display$3	CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L30	42	L24 AND L29	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 12:23 PM
L31	8016	L29 AND ((G06Q50/30 OR G06Q10/00 OR G06Q10/02 OR G06Q10/025 OR G06Q10/06312).cpc. OR (G06Q50/30 OR G06Q10/02 OR G06Q10/00).ipc.)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 12:24 PM
L32	47768	passenger WITH select$3 WITH (transport$ NEAR provider OR taxi OR vehicle OR uber)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH,	OR	ON	ON	2022/06/03 12:31 PM

			TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L33	3371	L32 AND ((G06Q50/30 OR G06Q10/00 OR G06Q10/02 OR G06Q10/025 OR G06Q10/06312).cpc. OR (G06Q50/30 OR G06Q10/02 OR G06Q10/00).ipc.)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 12:32 PM
L34	983	(transport$ OR ride OR ride-shar$3).ab. AND L33	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 12:33 PM
L35	751	route AND L34	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 12:33 PM
L36	169	passenger WITH select$3 WITH (transport$ NEAR provider OR taxi OR vehicle OR uber) SAME	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,	OR	ON	ON	2022/06/03 12:33 PM

		display$3 AND L35	EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L37	6481	confirm$ SAME (pick-up OR pickup OR pick ADJ up) SAME (drop ADJ off OR dropoff OR destination)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 12:47 PM
L38	117	L34 AND l37	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 12:48 PM
L39	2743	confirm$ WITH (pick-up OR pickup OR pick ADJ up) AND confirm$ WITH (drop ADJ off OR dropoff OR destination)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO;	OR	ON	ON	2022/06/03 12:50 PM

			JPO; DERWENT; IBM_TDB)				
L40	670	L39 AND ((G06Q50/30 OR G06Q10/00 OR G06Q10/02 OR G06Q10/025 OR G06Q10/06312).cpc. OR (G06Q50/30 OR G06Q10/02 OR G06Q10/00).ipc.)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 12:50 PM
L41	337	(transport$ OR ride OR ride-shar$3).ab. AND L40	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 12:51 PM
L42	2	("20040158483").pn.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 01:18 PM
L43	0	("20040158483").pn. AND display$	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS,	OR	ON	ON	2022/06/03 01:18 PM

			IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L44	5	("4360875").pn.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 01:19 PM
L45	1	("4360875").pn. AND display$3	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 01:19 PM
L46	4939	(transport$ NEAR vehicle OR driver) WITH (select$4 OR choos$3) near2 (rider OR passenger)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 02:04 PM

L47	10	L41 AND L46	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 02:05 PM
L48	813	L46 AND ((G06Q50/30 OR G06Q10/00 OR G06Q10/02 OR G06Q10/025 OR G06Q10/06312).cpc. OR (G06Q50/30 OR G06Q10/02 OR G06Q10/00).ipc.)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 02:05 PM
L49	270	L13 AND L48	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 02:06 PM
L50	3461	(transport$ NEAR vehicle OR driver) near3 (select$4 OR choos$3) near2 (rider OR passenger)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL,	OR	ON	ON	2022/06/03 02:09 PM

			NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L51	492	(transport$ OR ride OR ride-shar$3).ab. AND L50	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 02:09 PM
L52	0	("2003004090944").pn.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 02:50 PM
L53	0	("2003004090944").pn. AND SELECT$	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 02:50 PM
L54	10054	(select$3 OR choos$3) near2 (transport$ NEAR	(US-PGPUB; USPAT; USOCR; FIT (AP, AT,	OR	ON	ON	2022/06/03 03:43 PM

		vehicle OR driver OR taxi) near3 (select$4 OR choos$3) SAME (list$3 OR menu) WITH (transport$ NEAR vehicle OR driver OR taxi)	AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L55	1051	(passenger OR rider) SAME (transport$ NEAR vehicle OR driver OR taxi) near3 (select$4 OR choos$3) SAME (list$3 OR menu) WITH (transport$ NEAR vehicle OR driver OR taxi)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 03:44 PM
L56	843	L54 AND L55	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 03:44 PM
L57	10286	match$ WITH (passenger OR rider) WITH (transport$ NEAR vehicle OR driver OR taxi)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE,	OR	ON	ON	2022/06/03 03:45 PM

			SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L58	183	L56 AND L57	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 03:45 PM
L59	393	(vehicle OR driver OR taxi OR car-pool) WITH (select$3 OR choos$3) near1 (rider OR passenger) WITH (list$3 OR menu)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 04:19 PM
L60	51	L57 AND L59	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 04:20 PM
L61	2	sean.in. AND L48	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU,	OR	ON	ON	2022/06/03 05:20 PM

			CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L62	1047	sean.in. AND L19	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 05:21 PM
L63	342	o'sullivan.in. AND L19	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/06/03 05:21 PM
L64	69	L62 AND l63	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA,	OR	ON	ON	2022/06/03 05:21 PM

			VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				

PE2E SEARCH - Search History (Interference)

There are no Interference searches to show.

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17155221
	Filing Date	2021-01-22
	First Named Inventor	O'SULLIVAN; Sean
	Art Unit	
	Examiner Name	
	Attorney Docket Number	00199-0001-24000

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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	Examiner Name	
	Attorney Docket Number	00199-0001-24000

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	21	10121289		2018-11-06	GRAVELLE; Kelly	
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	27	10803749		2020-10-13	O'SULLIVAN; Sean	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	17155221
	Filing Date	2021-01-22
	First Named Inventor	O'SULLIVAN; Sean
	Art Unit	
	Examiner Name	
	Attorney Docket Number	00199-0001-24000

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	Examiner Name	
	Attorney Docket Number	00199-0001-24000

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	Examiner Name	
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	2	10113803	DE	A1	2002-09-26	SIEMENS BUSINESS SERVICES GMBH [DE]		☒
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Receipt date: 07/12/2021

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	17155221
	Filing Date	2021-01-22
	First Named Inventor	O'SULLIVAN; Sean
	Art Unit	
	Examiner Name	
	Attorney Docket Number	00199-0001-24000

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	First Named Inventor	O'SULLIVAN; Sean
	Art Unit	
	Examiner Name	
	Attorney Docket Number	00199-0001-24000

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Signature	/Joel S. Simon/	Date (YYYY-MM-DD)	2021-07-12
Name/Print	Joel S. Simon	Registration Number	70271

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Bibliographic Data

Application No: 17/155,221

Foreign Priority claimed: ○ Yes ◉ No

35 USC 119 (a-d) conditions met: ☐ Yes ☑ No ☐ Met After Allowance

Verified and Acknowledged: /KEITH FERGUSON/ (Examiner's Signature) KF (Initials)

Title: SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
01/22/2021 **RULE**	455	2648	00199-0001-24000

APPLICANTS

CARMA TECHNOLOGY LIMITED, Cork City, IRELAND

INVENTORS

Sean O'SULLIVAN, Princeton, NJ, UNITED STATES

CONTINUING DATA

This application is a CON of 16670220 10/31/2019 PAT 10916138

16670220 is a CON of 16564819 09/09/2019 PAT 10672271

16564819 is a CON of 16197953 11/21/2018 PAT 10453339

16197953 is a CON of 15998864 08/17/2018 PAT 11210947

15998864 is a CON of 12924487 09/28/2010 PAT 10083608

12924487 is a DIV of 12069656 02/12/2008 PAT 7840427

12069656 has PRO of 60900808 02/12/2007

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Application Number	17155221
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First Named Inventor	O'SULLIVAN; Sean
Art Unit	2648
Examiner Name	FERGUSON, KEITH
Attorney Docket Number	00199-0001-24000

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APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/155,221	**11/22/2021 10:24:46 AM ET**	**00199-0001-24000**

Title of Invention

SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	5591	FILED BY	Jeovany Cantillano
PATENT CENTER #	60410851	FILING DATE	01/22/2021
CUSTOMER #	108449	FIRST NAMED INVENTOR	Sean O'SULLIVAN
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	Joel Simon

Documents

TOTAL DOCUMENTS: 2

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
SB08.pdf	4	Information Disclosure Statement (IDS) Form (SB08)	1029 KB
JP2002074119A.pdf	12	Foreign Reference	5349 KB

Digest

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SB08.pdf	BB91100145ECADEB649AA691A82DDA467ECCC3F4F51D9CBC7C40DF3C31DDAE5A88742C7CBB79270102642639 5F6B22DA18AC177E463BC0B1811BD13BD8635722

JP2002074119A.pdf 0C5080EBB4FBFB2D2D7479899844E1518B776620AD27A97FB C1CD7F8AEA1AF81791E6FEA163A5EC511193F0E6FC554042E 5E95A64C8854D7F9F733A3963022C4

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PTO/SB/08a (02-18)
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(Not for submission under 37 CFR 1.99)

Application Number	17155221
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Attorney Docket Number	00199-0001-24000

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Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Joel S. Simon/	Date (YYYY-MM-DD)	2021-07-12
Name/Print	Joel S. Simon	Registration Number	70271

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/155,221	**07/12/2021 01:33:54 PM ET**	**00199-0001-24000**

Title of Invention

SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	5591	FILED BY	Jeovany Cantillano
PATENT CENTER #	60237549	FILING DATE	01/22/2021
CUSTOMER #	108449	FIRST NAMED INVENTOR	Sean O'SULLIVAN
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	Joel Simon

Documents

TOTAL DOCUMENTS: 35

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
CA1186056A.pdf	47	Foreign Reference	7569 KB
DAILEY.pdf	17	Non Patent Literature	6380 KB
DE10113803A1.pdf	40	Foreign Reference	7261 KB
DE10237831A1.pdf	6	Foreign Reference	467 KB
DILLENBURG.pdf	7	Non Patent Literature	2955 KB
EP1710768A2.pdf	15	Foreign Reference	3330 KB
HALL.pdf	8	Non Patent Literature	2069 KB

HU.pdf	142	Non Patent Literature	7026 KB
HWANG_Part1.pdf	70	Non Patent Literature	22418 KB
HWANG_Part2.pdf	70	Non Patent Literature	24655 KB
HWANG_Part3.pdf	70	Non Patent Literature	24766 KB
HWANG_Part4.pdf	54	Non Patent Literature	16573 KB
HYRECAR.pdf	22	Non Patent Literature	4680 KB
JP2001291192A.pdf	30	Foreign Reference	8400 KB
JP2002140399A.pdf	18	Foreign Reference	6027 KB
JP2002367086A.pdf	29	Foreign Reference	8644 KB
JP2003168195A.pdf	44	Foreign Reference	12717 KB
JP2003256982A.pdf	24	Foreign Reference	6805 KB
JP2003331013A.pdf	19	Foreign Reference	5034 KB
JP2005182146A.pdf	38	Foreign Reference	9234 KB
MIYAMOTO.pdf	6	Non Patent Literature	3204 KB
ROORDA.pdf	6	Non Patent Literature	4516 KB
SAVELSBERGH.pdf	14	Non Patent Literature	3446 KB
SB08.pdf	16	Information Disclosure Statement (IDS) Form (SB08)	1034 KB
STEGER.pdf	6	Non Patent Literature	3957 KB
WINTER.pdf	8	Non Patent Literature	3438 KB

WO0161604A1.pdf	52	Foreign Reference	1487 KB
WO0206994A2.pdf	30	Foreign Reference	5247 KB
WO03023641A1.pdf	36	Foreign Reference	5929 KB
WO03040971A1.pdf	71	Foreign Reference	12280 KB
WO9952084A1.pdf	21	Foreign Reference	3255 KB
WO2004081833A1.pdf	34	Foreign Reference	6062 KB
WO2005045549A2.pdf	48	Foreign Reference	2405 KB
WO2006011158A2.pdf	42	Foreign Reference	1755 KB
WO2006088703A2.pdf	119	Foreign Reference	6798 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
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National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
17/155,221	01/22/2021	Sean O'SULLIVAN	00199-0001-24000

CONFIRMATION NO. 5591

PUBLICATION NOTICE

108449
Bookoff McAndrews, PLLC
2020 K Street NW
Suite 400
Washington, DC 20006

OC000000125569290

Title:SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE

Publication No.US-2021-0142669-A1
Publication Date:05/13/2021

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

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The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Public Records Division. The Public Records Division can be reached by telephone at (571) 272-3150 or (800) 972-6382, by facsimile at (571) 273-3250, by mail addressed to the United States Patent and Trademark Office, Public Records Division, Alexandria, VA 22313-1450 or via the Internet.

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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number
17/155,221

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	80		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	350		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	400		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	20 minus 20 =	*	x 50 =	0.00	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3 minus 3 =	*	x 240 =	0.00			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	830		TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
AMENDMENT A	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
AMENDMENT A	Application Size Fee (37 CFR 1.16(s))									
AMENDMENT A	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE($)	ADDITIONAL FEE($)	OR	RATE($)	ADDITIONAL FEE($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
AMENDMENT B	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
AMENDMENT B	Application Size Fee (37 CFR 1.16(s))									
AMENDMENT B	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.

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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
17/155,221	01/22/2021		830	00199-0001-24000	20	3

CONFIRMATION NO. 5591

FILING RECEIPT

OC000000123139011

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Suite 400
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Date Mailed: 02/04/2021

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

Sean O'SULLIVAN, Princeton, NJ;

Applicant(s)

CARMA TECHNOLOGY LIMITED, Cork City, IRELAND;

Power of Attorney: The patent practitioners associated with Customer Number 108449

Domestic Priority data as claimed by applicant

This application is a CON of 16/670,220 10/31/2019 PAT 10916138
which is a CON of 16/564,819 09/09/2019 PAT 10672271
which is a CON of 16/197,953 11/21/2018 PAT 10453339
which is a CON of 15/998,864 08/17/2018
which is a CON of 12/924,487 09/28/2010 PAT 10083608
which is a DIV of 12/069,656 02/12/2008 PAT 7840427
which claims benefit of 60/900,808 02/12/2007

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

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The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 17/155,221**
Projected Publication Date: 05/13/2021
Non-Publication Request: No
Early Publication Request: No
**** SMALL ENTITY ****
Title

SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE

Preliminary Class

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	Sean O'SULLIVAN
Art Unit	
Examiner Name	
Attorney Docket Number	00199-0001-24000

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6363323	B1	2002-03-26	Jones	

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	1	20010037174	A1	2001-11-01	Dickerson	
	2	20020011940	A1	2002-01-31	Cappel	
	3	20020034292	A1	2002-03-21	Tuoriniemi et al.	
	4	20020135515	A1	2002-09-26	Rankin et al.	
	5	20030040944	A1	2003-02-27	Hileman	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	
	Filing Date	
	First Named Inventor	Sean O'SULLIVAN
	Art Unit	
	Examiner Name	
	Attorney Docket Number	00199-0001-24000

	6	20040049424	A1	2004-03-11	Murray et al.	
	7	20040106399	A1	2004-06-03	Ki	
	8	20040124977	A1	2004-07-01	Biffar	
	9	20050172148	A1	2005-08-04	Ying	
	10	20070135078	A1	2007-06-14	Ljung	
	11	20070179792	A1	2007-08-02	Kramer	
	12	20080270019	A1	2008-10-30	Anderson et al.	
	13	20080277183	A1	2008-11-13	Huang et al.	
	14	20040243430	A1	2004-12-02	Horstemeyer	
	15	20060010037	A1	2006-01-12	Angert et al.	
	16	20080125967	A1	2008-05-29	SPRIGG	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	
	Filing Date	
	First Named Inventor	Sean O'SULLIVAN
	Art Unit	
	Examiner Name	
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	1	02073546	WO	A2	2002-09-19	Andersen et al.		
	2	2003036498	JP	A	2003-02-07	Muramatsu, Haruji		

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	1	CHI-CHUNG TAO, "Dynamic Taxi-sharing Service Using Intelligent Transportation System Technologies," 2007, IEEE, 007 International Conference on Wireless Communications, Networking and Mobile Computing Wireless Communications, Networking and Mobile Computing, pp. 3209-3212.	

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Examiner Signature		Date Considered	

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[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	
	Filing Date	
	First Named Inventor	Sean O'SULLIVAN
	Art Unit	
	Examiner Name	
	Attorney Docket Number	00199-0001-24000

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Joel S. Simon/	Date (YYYY-MM-DD)	2021-01-22
Name/Print	Joel S. Simon	Registration Number	70271

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Application Number:	
Filing Date:	
Title of Invention:	SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE
First Named Inventor/Applicant Name:	Sean O'SULLIVAN
Filer:	Joel Stuart Simon/Jeovany Cantillano
Attorney Docket Number:	00199-0001-24000

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
UTILITY FILING FEE (ELECTRONIC FILING)	4011	1	80	80
UTILITY SEARCH FEE	2111	1	350	350
UTILITY EXAMINATION FEE	2311	1	400	400
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**830**

Electronic Acknowledgement Receipt	
EFS ID:	41714718
Application Number:	17155221
International Application Number:	
Confirmation Number:	5591
Title of Invention:	SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE
First Named Inventor/Applicant Name:	Sean O'SULLIVAN
Customer Number:	108449
Filer:	Joel Stuart Simon/Jeovany Cantillano
Filer Authorized By:	Joel Stuart Simon
Attorney Docket Number:	00199-0001-24000
Receipt Date:	22-JAN-2021
Filing Date:	
Time Stamp:	10:35:35
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$830
RAM confirmation Number	E20211LA36057789
Deposit Account	
Authorized User	
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal of New Application	ConAppTrans.pdf	90830 d88fe560d5b44e7f5b0b572dc3f3e61ad3617515	no	3
Warnings:					
Information:					
2	Application Data Sheet	ADS.pdf	1874491 adf3fba6031c35d85dc0029176510d21ae5f2667	no	9
Warnings:					
Information:					
3	Specification	Specification.pdf	2389070 4b6bedae99dab03948bbfdd966f0e0e0c148a715	no	62
Warnings:					
Information:					
4	Drawings-only black and white line drawings	Drawings.pdf	668654 48f8a19fc58ad1f88abd0965aeba479cabb2f192	no	32
Warnings:					
Information:					
5	Oath or Declaration filed	Declaration.pdf	95633 a82140b2e27579ce8d6b9360e5fab77c028225d2	no	1
Warnings:					
Information:					
6	Power of Attorney	POA.pdf	256122 6c8565d9133ddcccbffe5ff6f06e1a233674c851	no	2
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7	Preliminary Amendment	Pre_Amendment.pdf	115037 685725ed8704eb3ae21aec513cf37bcad27cc805	no	13
Warnings:					
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8	Drawings-only black and white line drawings	Replacement_Drawings.pdf	133157 d5eb63f90788c6b23624433b7f881be2970778ba	no	32
Warnings:					
Information:					
9	Transmittal Letter	IDS_Transmittal.pdf	94473 0ed74c694c9652c69ce37f6369a690dad6c8abd9	no	2
Warnings:					
Information:					
10	Information Disclosure Statement (IDS) Form (SB08)	SB08.pdf	1054100 cbe7a58a47c04d5c52255c07e0a4af7033932e2d	no	5
Warnings:					
Information:					
11	Fee Worksheet (SB06)	fee-info.pdf	35154 f3f0eaf3d485d467b8a75e6bdd9a4bf8918204dc	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	6806721		

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National Stage of an International Application under 35 U.S.C. 371
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Document Description: Power of Attorney

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Application Number	Not Yet Assigned
Filing Date	Concurrently Herewith
First Named Inventor	Sean O'SULLIVAN
Title	SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE
Art Unit	Not Yet Assigned
Examiner Name	Not Yet Assigned
Attorney Docket Number	00199-0001-24000

SIGNATURE of Applicant or Patent Practitioner

Signature	/Joel S. Simon/	Date (Optional)	2021-01-22
Name	Joel S. Simon	Registration Number	70271
Title (if Applicant is a juristic entity)	Authorized Representative		
Applicant Name (if Applicant is a juristic entity)	Carma Technology Ltd.		

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☑ *Total of 1 forms are submitted.

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Application Number	Filing Date

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Address					
City		State		Zip	
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I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

Carma Technology Ltd.

☐ Inventor or Joint Inventor (title not required below)

☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)

☑ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)

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SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature		Date (Optional)	
Name	Lawrence Mulligan		
Title	Chief Executive Officer		

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FIGURE 1. SHARED TRANSPORT NETWORK SYSTEM

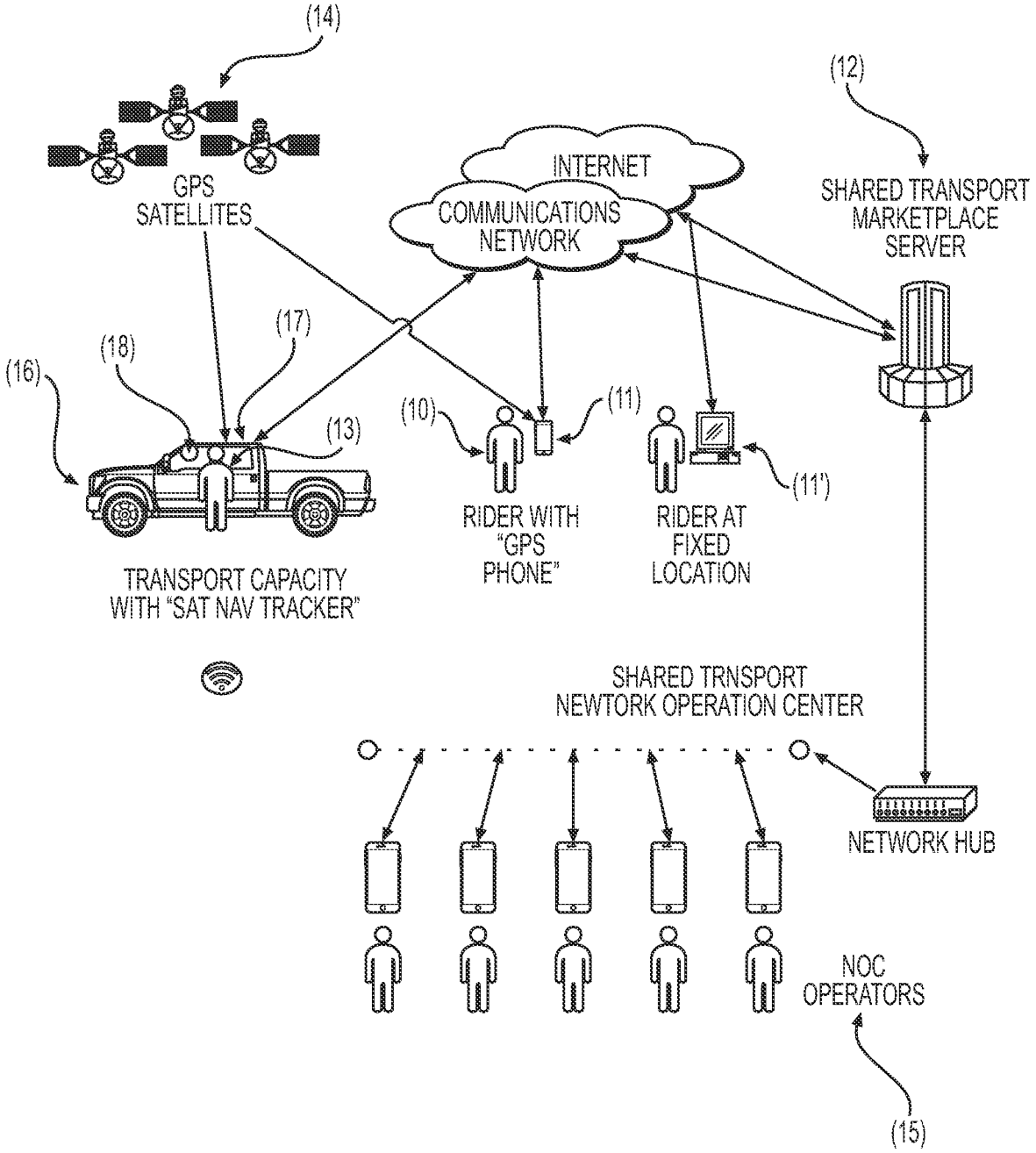


FIGURE 2. TRANSPORT CAPACITY COMPUTING AND COMMUNICATIONS COMPONENTS

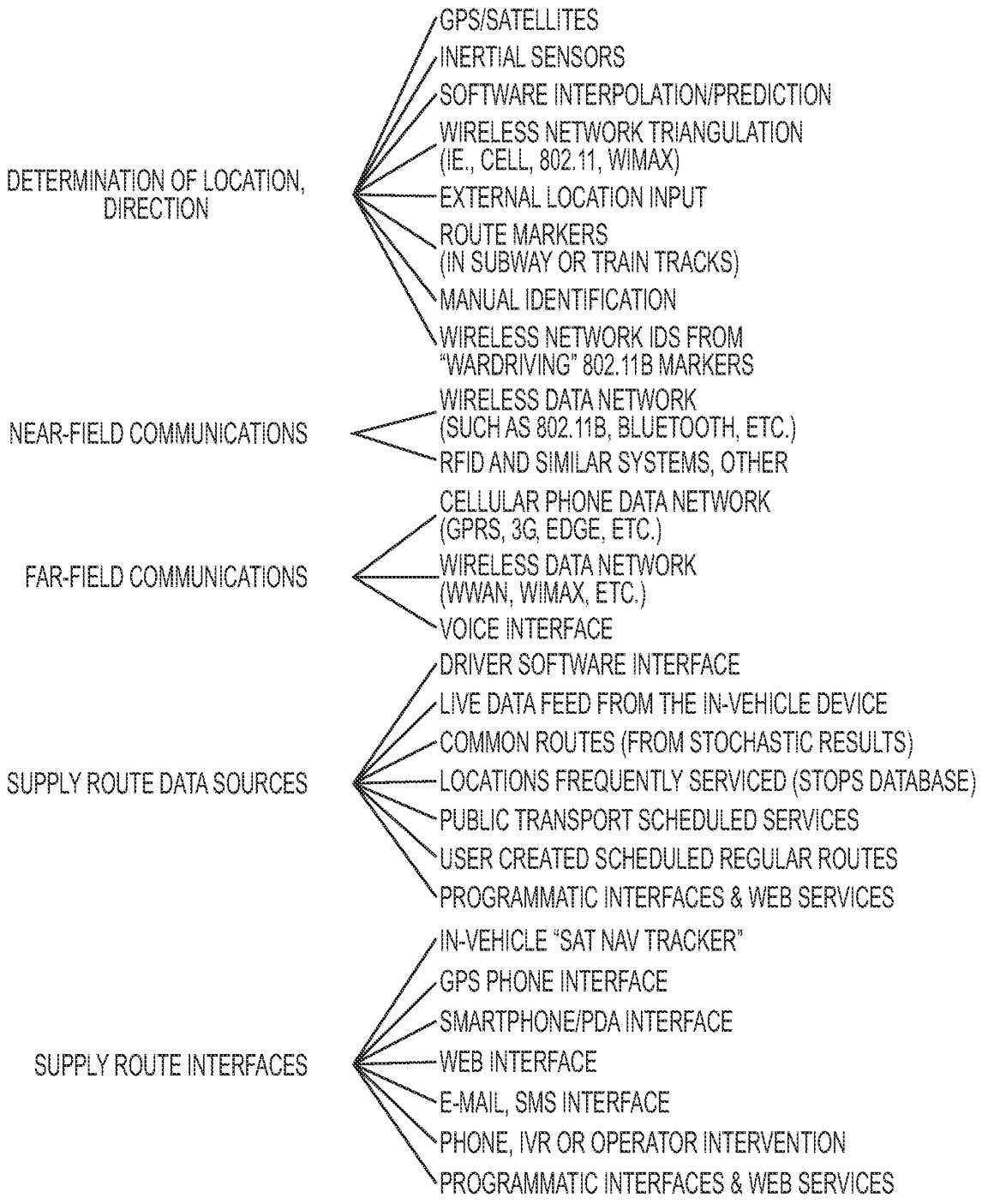


FIGURE 3. RIDER TECHNOLOGY COMPONENTS AND INFORMATION ELEMENTS

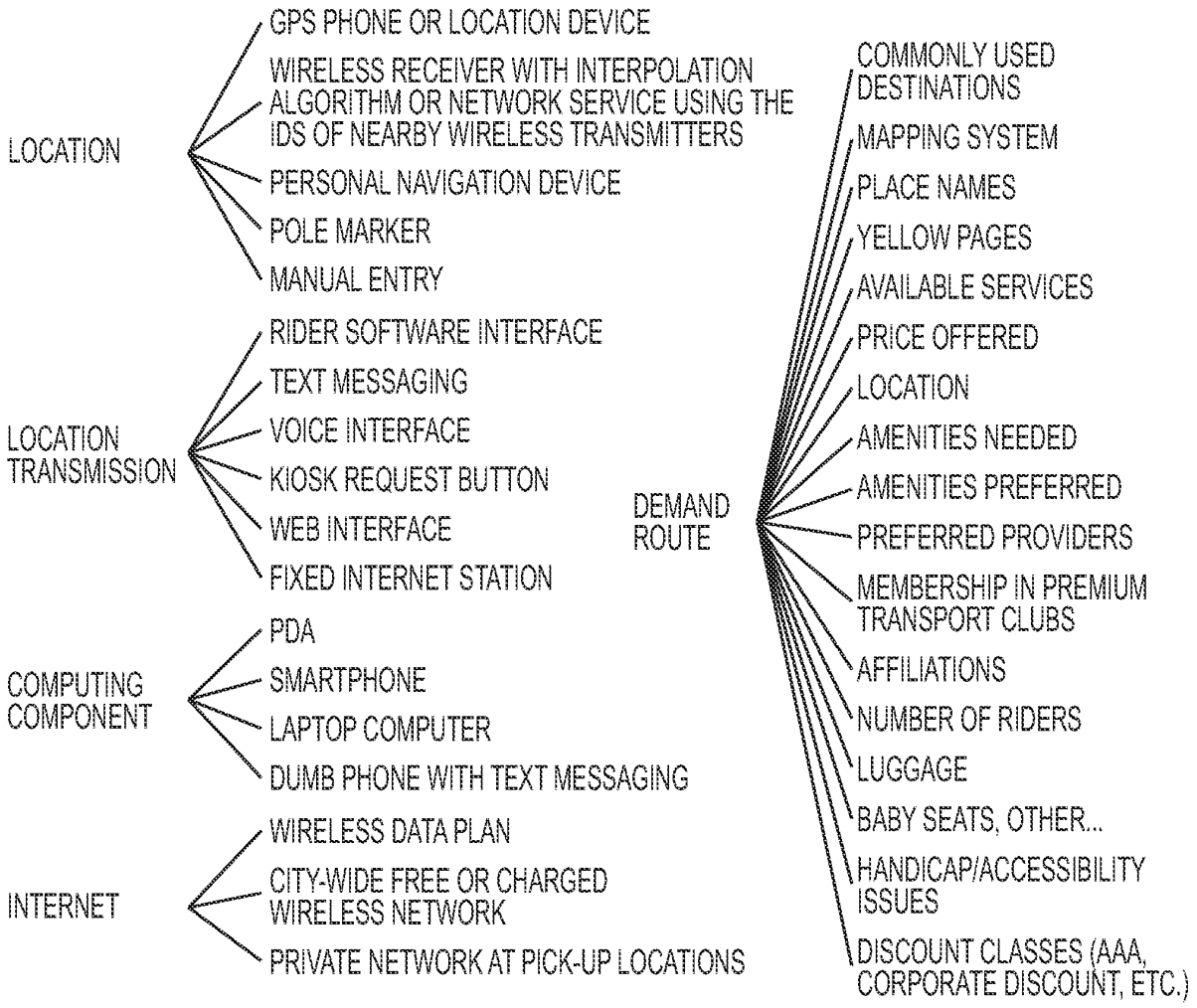
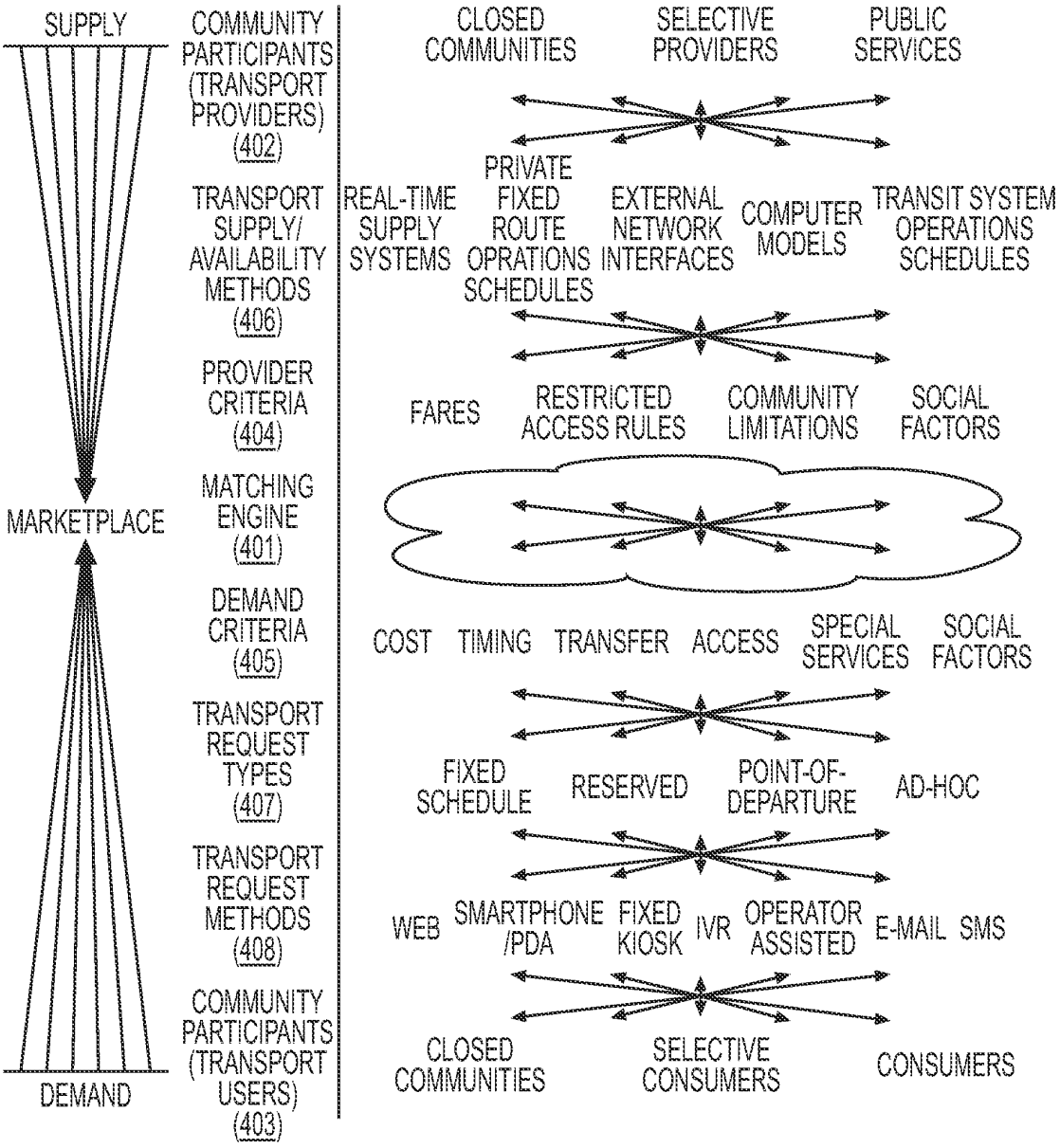


FIGURE 4. SHARED TRANSPORT MARKETPLACE



PUBLIC SHARED TRANSPORT PROVIDERS
BUS NETWORKS
RAIL & SUBWAY NETWORKS
JITNEY/SHARE TAXI PROVIDERS
PRIVATE SCHEDULED SERVICE BUS

FREIGHT TRANSPORT PROVIDERS
PRIVATE PACKAGE TRANSPORT COMPANIES
NATIONAL POSTAL CARRIERS
INDEPENDENT OPERATORS
AD-HOC CONSUMER

CLOSED MEMBER COMMUNITIES
SCHOOL BUS SYSTEMS
EMPLOYEE SHUTTLE BUSES
AFFILIATIONS (SOCIAL CLUBS, SPORTS NETWORKS)

DISPATCHABLE, NON-SHARED TRANSPORT
TAXI COMPANIES
PRIVATE HACKNEY OPERATORS
PREMIUM SERVICE TRANSPORT OPERATOR

FIGURE 5a. RIDER EXPERIENCE FLOWCHART

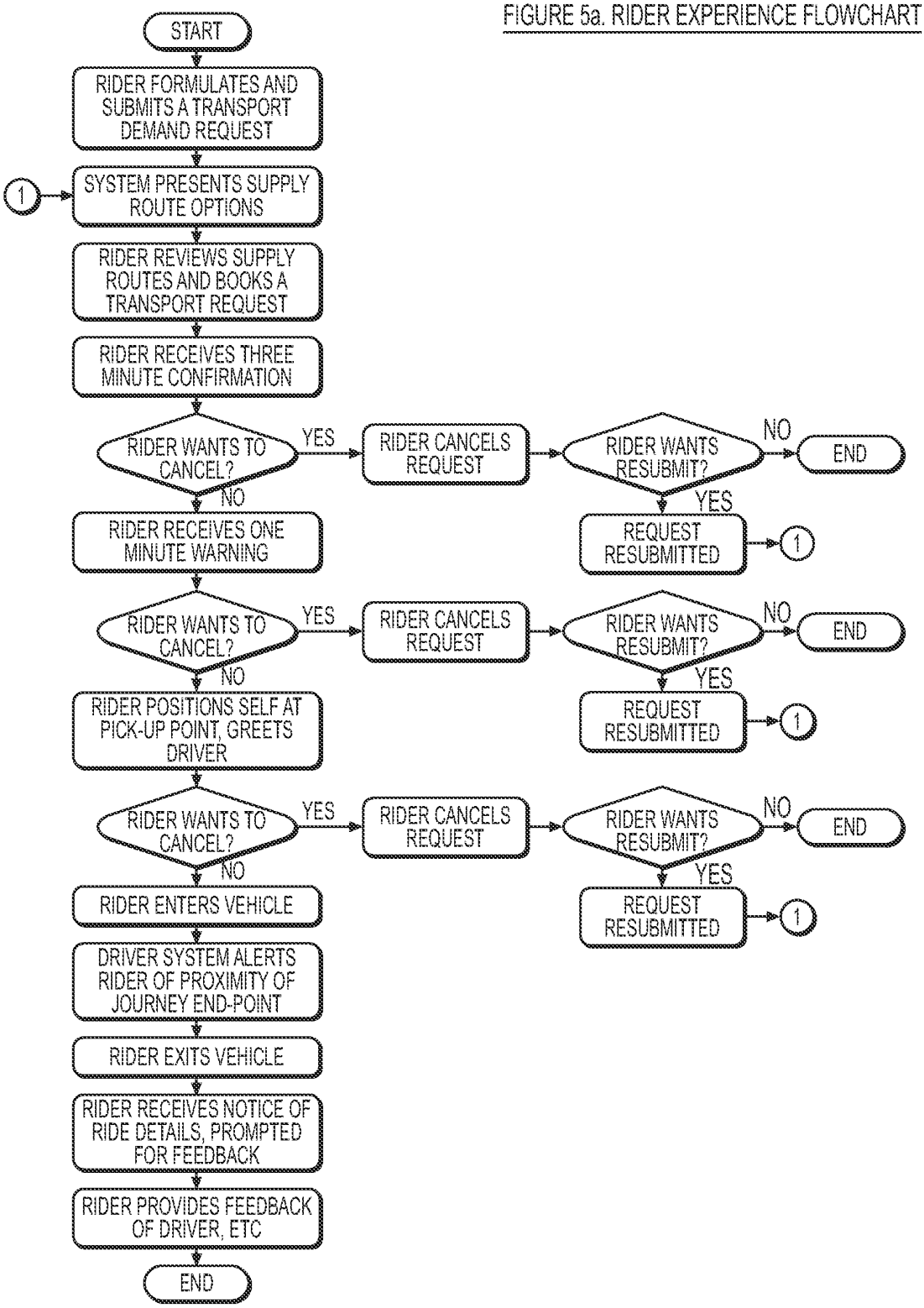


FIGURE 5b. RIDER EXPERIENCE, FUNCTIONAL OPTIONS DATA AND ACTION DETAILS

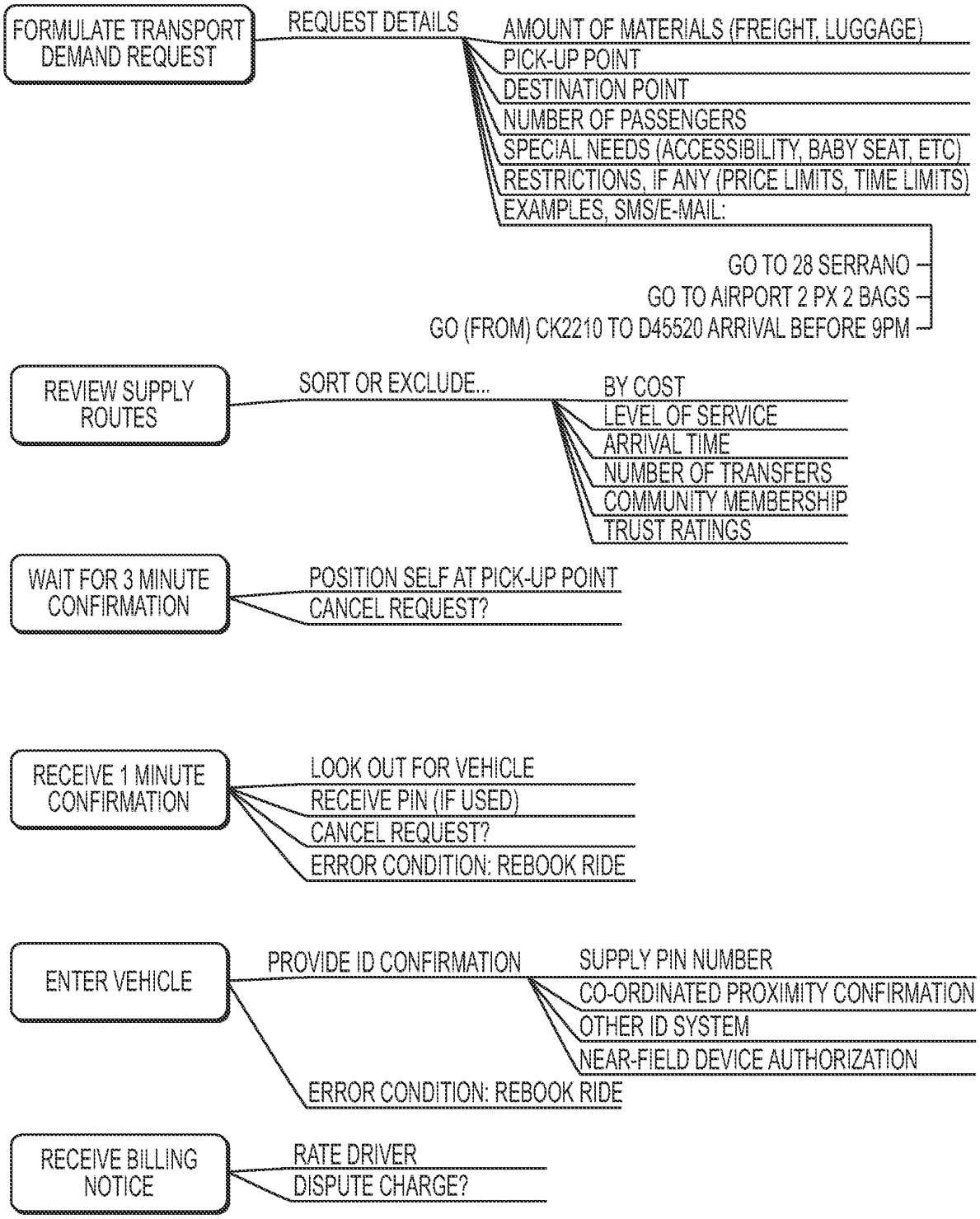


FIGURE 6a. DRIVER EXPERIENCE FLOWCHART

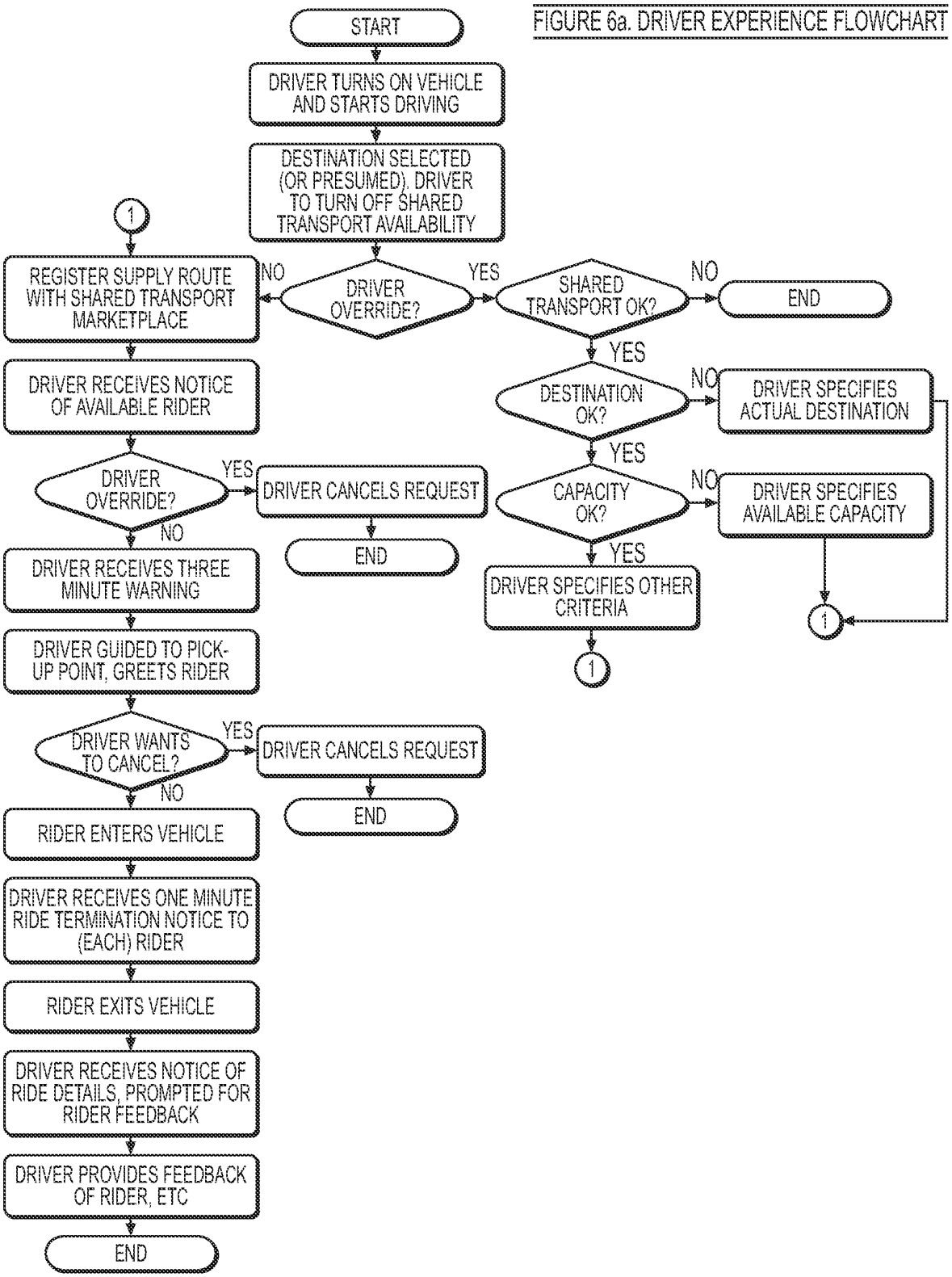
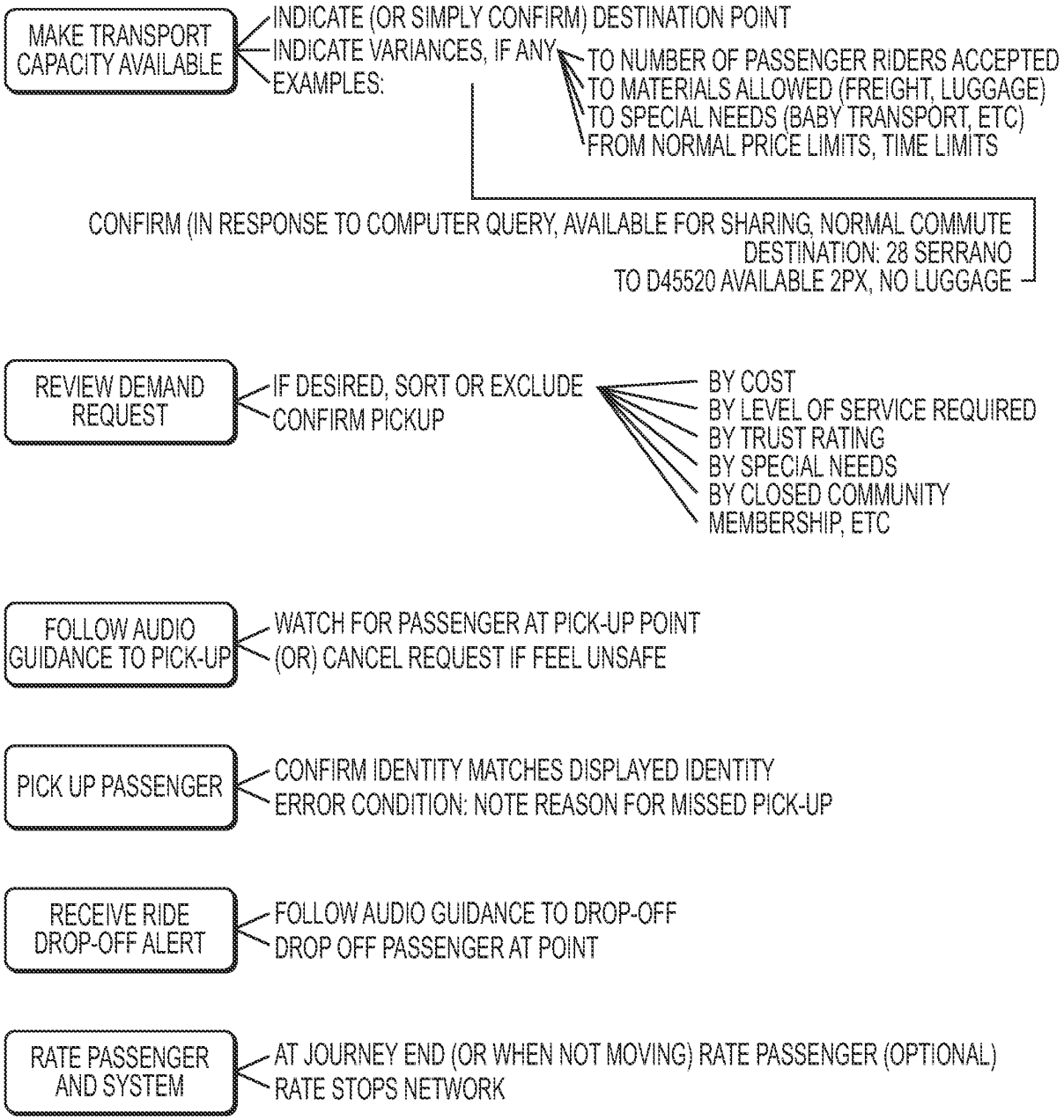
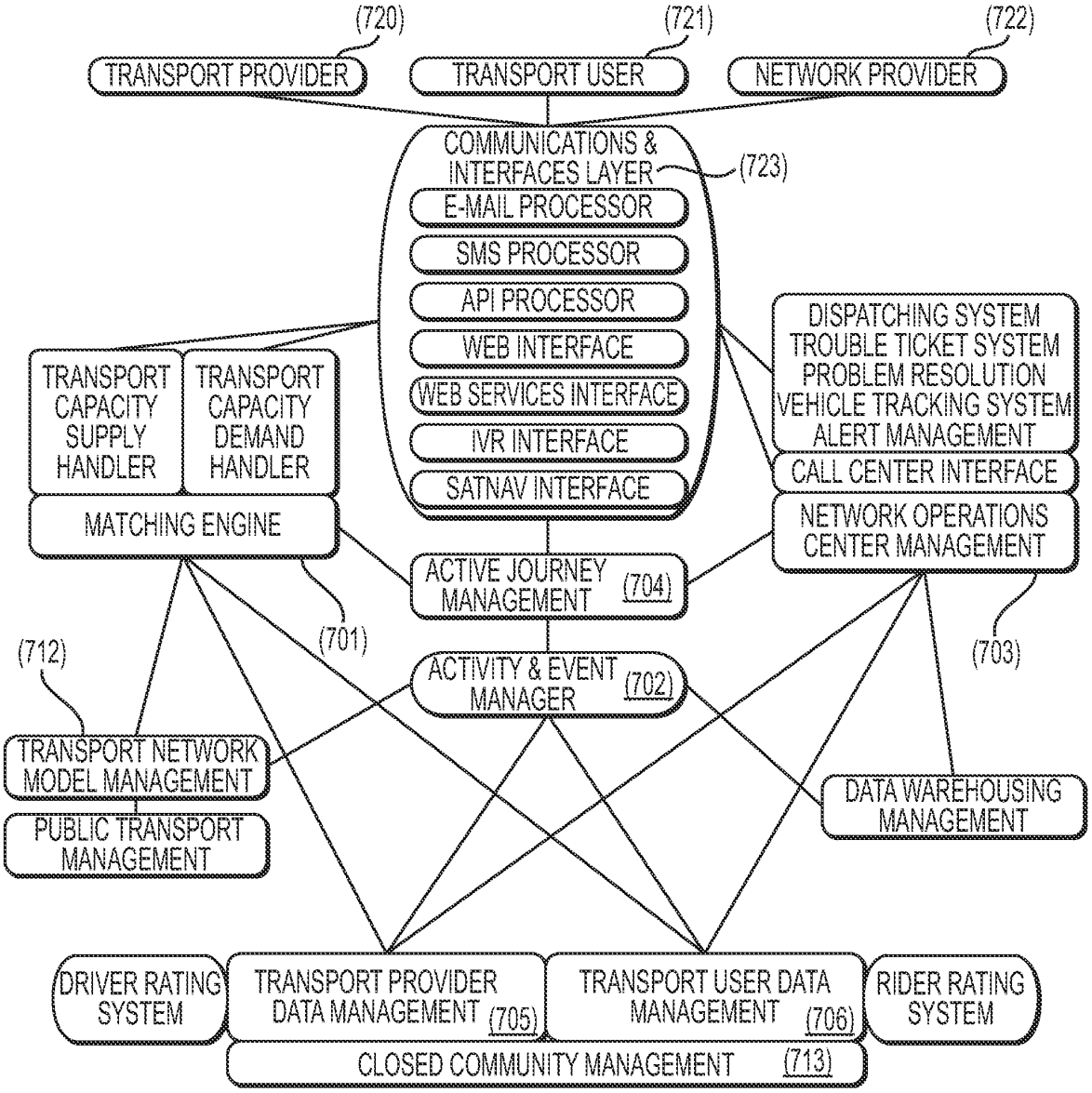


FIGURE 6b. DRIVER EXPERIENCE - FUNCTIONAL OPTIONS





RIDER DB (707)
-PREFERENCES
-PLACENAMES
-TRANSACTIONS
-AUDIT TRAIL
-ACTIVITY
-RATINGS
-ROUTES
-COMMUNITIES

DRIVER DB (708)
-PREFERENCES
-PLACENAMES
-TRANSACTIONS
-AUDIT TRAIL
-ACTIVITY
-RATINGS
-ROUTES
-COMMUNITIES

NETWORK MODEL DB (710)
-STOPS
-TRANSIT TIMES
-DISTANCES
-STOCHASTIC MODEL INFO
-VISUALIZATION INFO

JOURNEYS DB (709)
-JOURNEY ACTIVITY

ACTIVITY & EVENT MANAGER
DRIVER EVENT HANDLING
RIDER EVENT HANDLING
INTERFACE WITH BILLING SYSTEM
EXTERNAL TICKETING INTERFACES

TRANSPORT MANAGEMENT STOCHASTIC ANALYZER (711)
GEOGRAPHY MANAGER
PUBLIC TRANSPORT MODEL
VISUALIZATION MODELS

FIGURE 7. SHARED TRANSPORT MARKETPLACE SERVER & SUBSYSTEMS

FIGURE 8a. DRIVER JOURNEY, ON STREET NETWORK

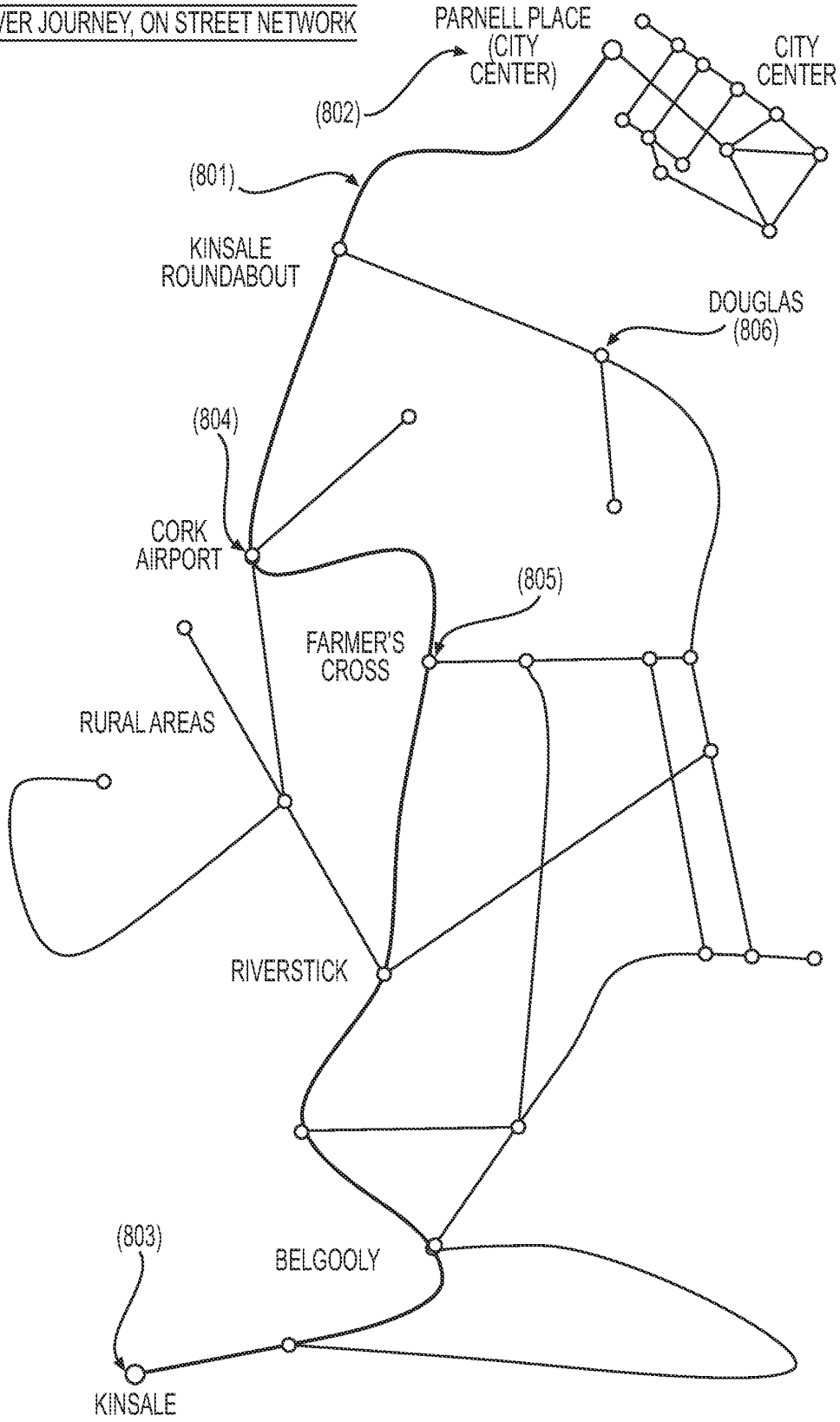


FIGURE 8b. DRIVER JOURNEY LOGICAL CHARACTERIZATION

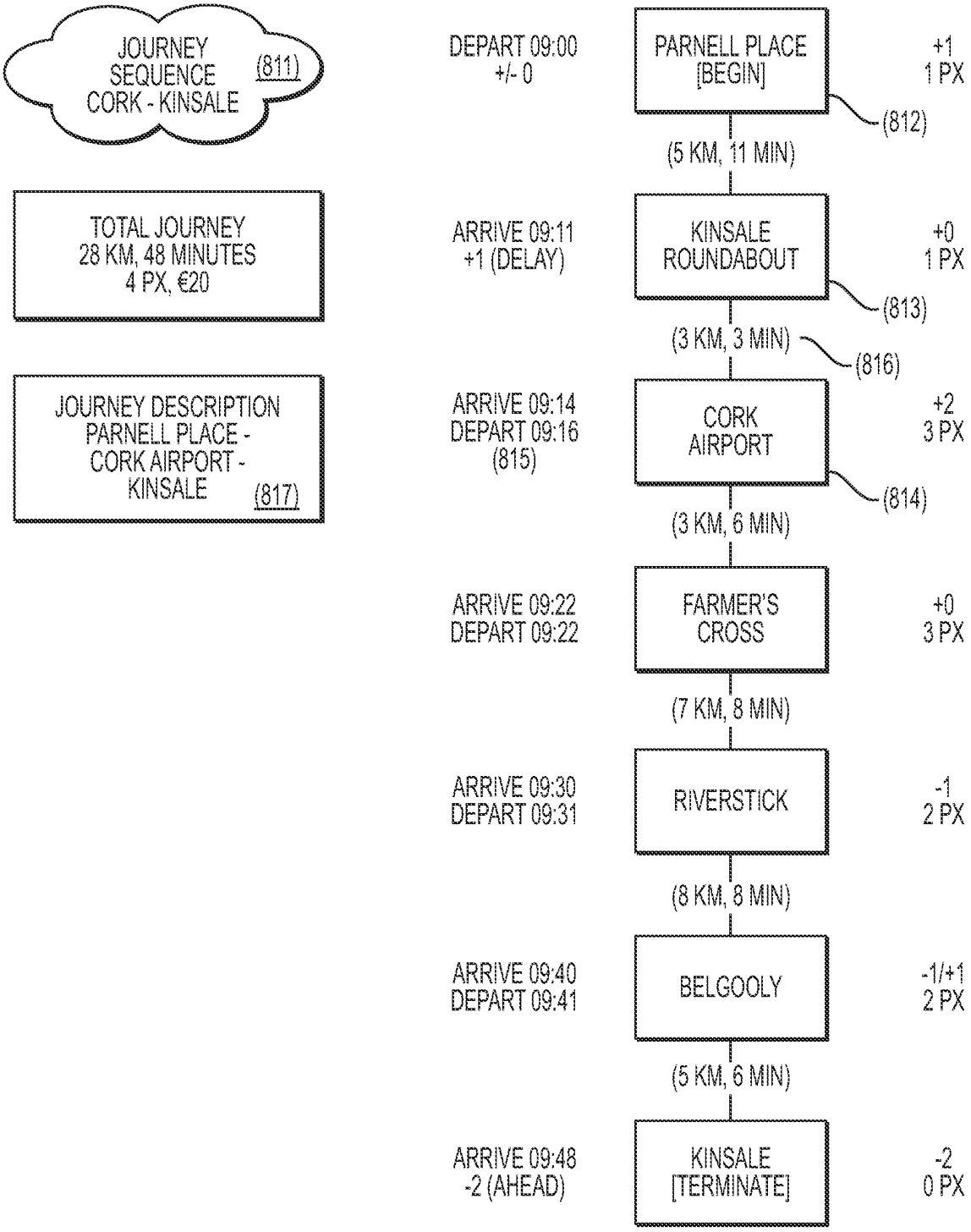


FIGURE 9a. ACTIVE NETWORK, GEOGRAPHICAL REPRESENTATION

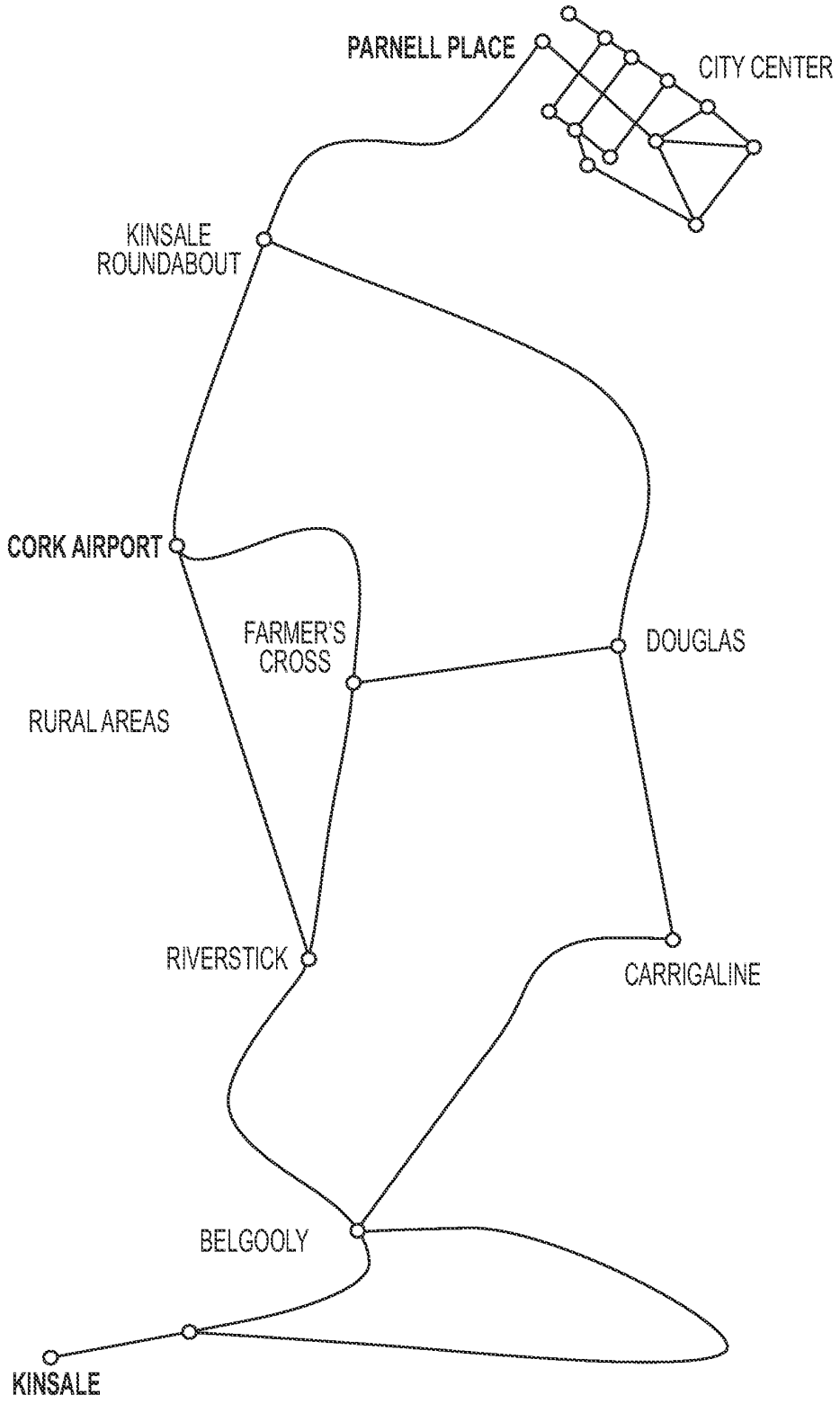


FIGURE 9b. ACTIVE TRANSPORT NETWORK, LOGICAL PRESENTATION

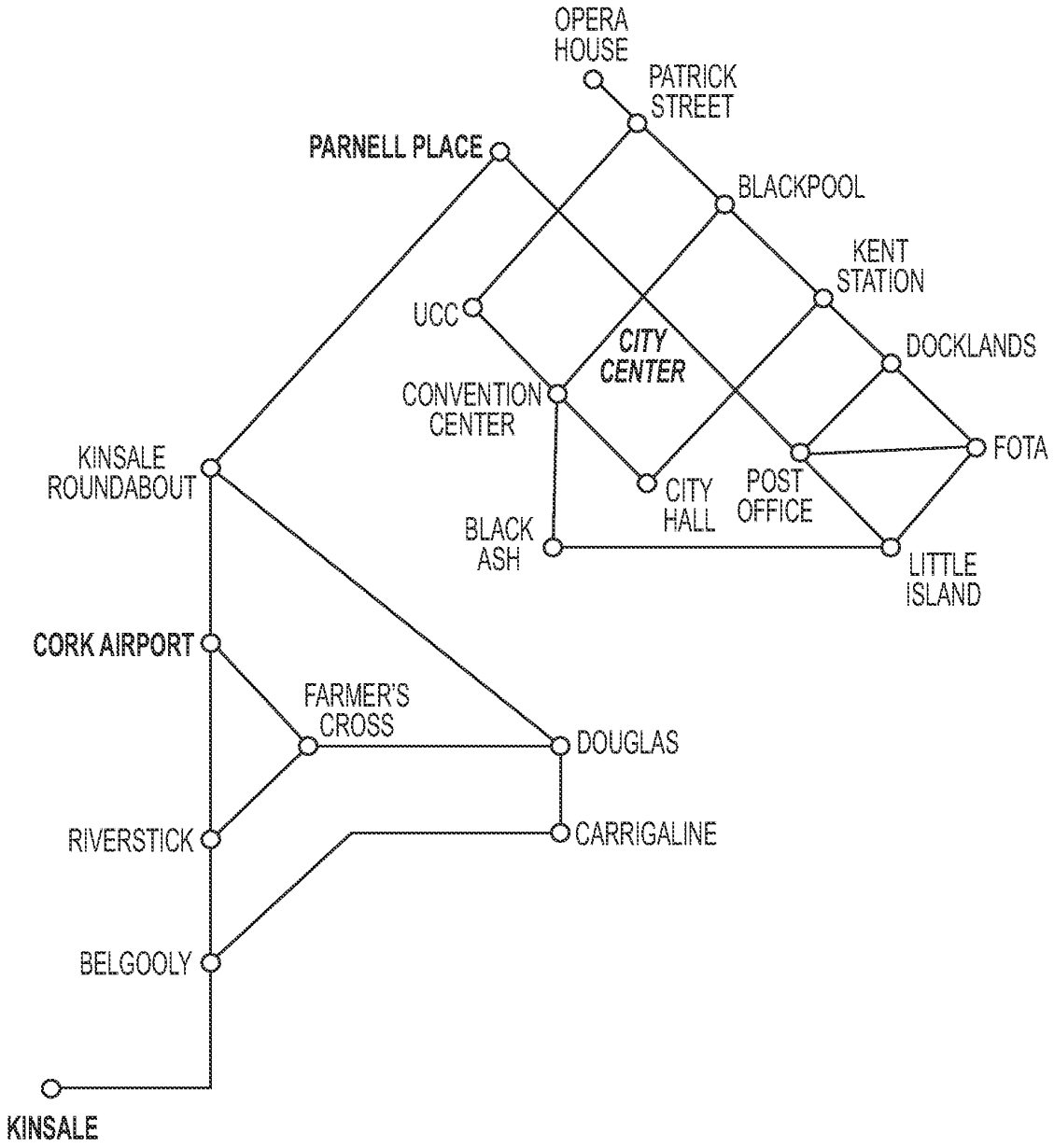
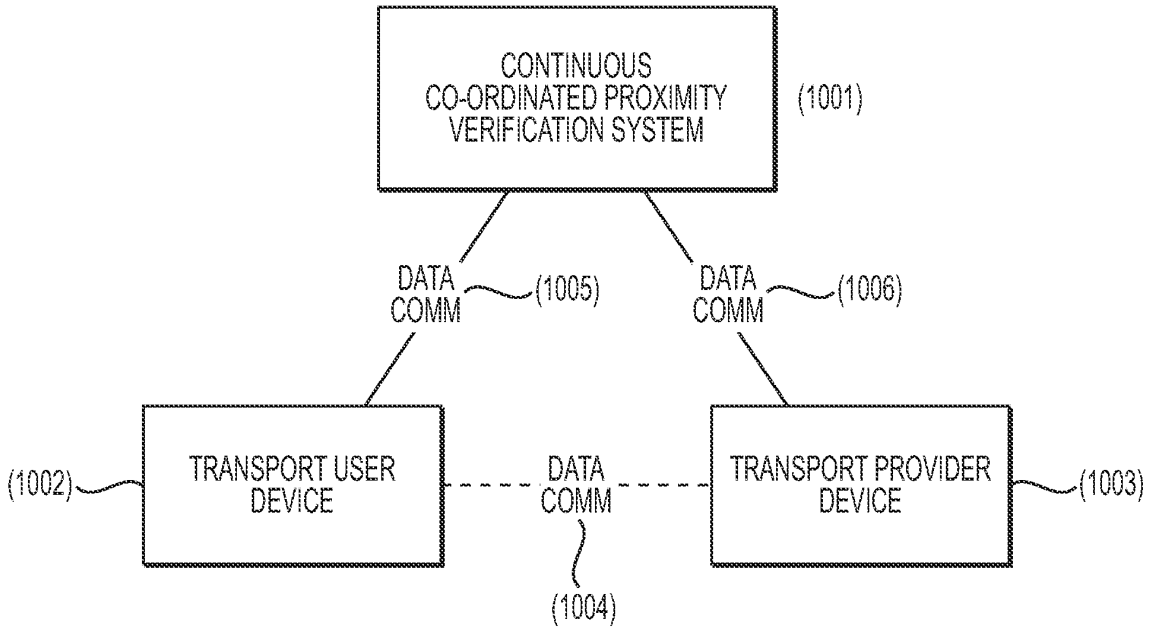


FIGURE 10a. ELEMENTS AND COMMUNICATION CHANNELS FOR CONTINUOUS CO-ORDINATED PROXIMITY BY INDEPENDENT VERIFICATION OF POSITION



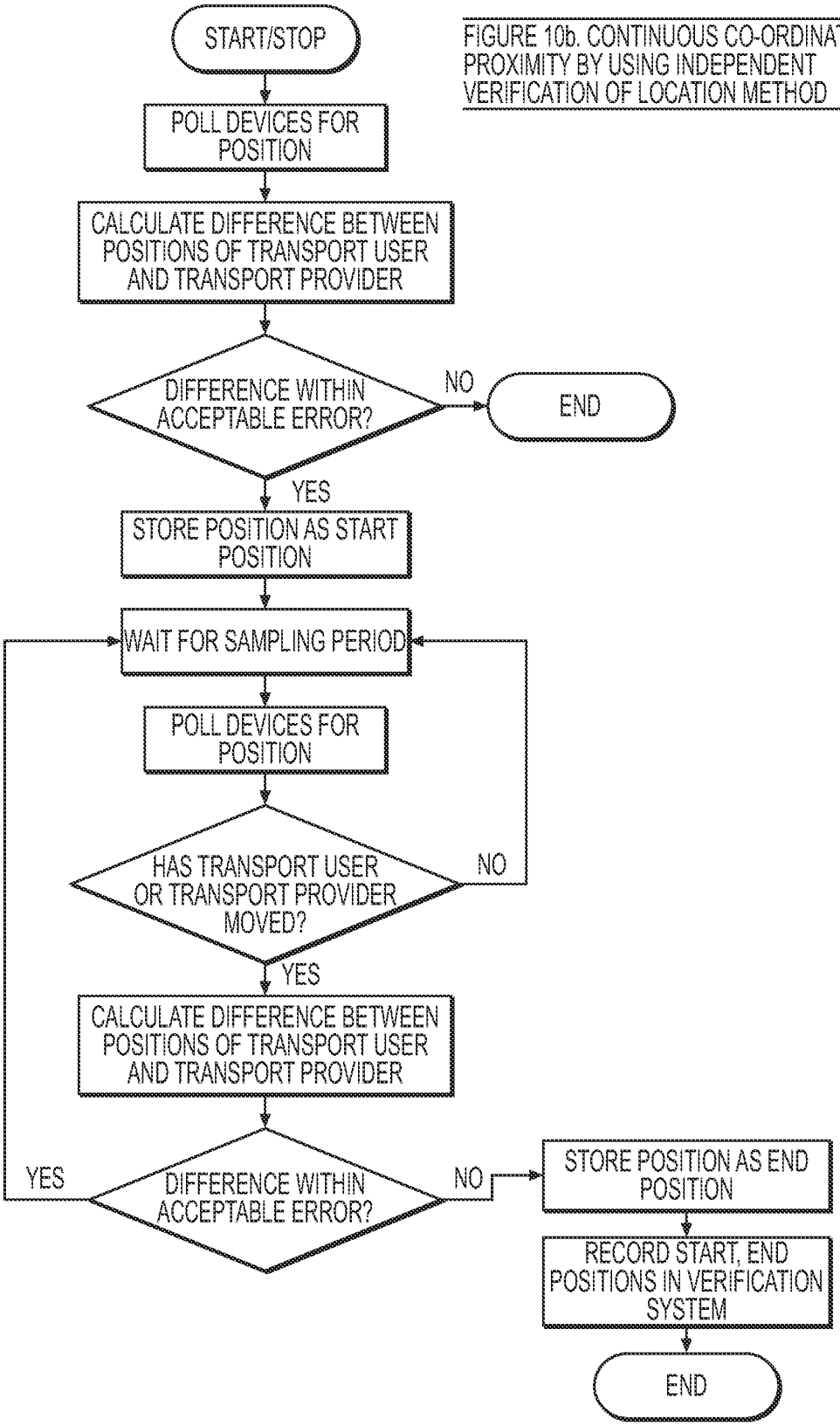


FIGURE 10b. CONTINUOUS CO-ORDINATED PROXIMITY BY USING INDEPENDENT VERIFICATION OF LOCATION METHOD

FIGURE 11a. ELEMENTS AND DATA COMMUNICATIONS LINKS IN CONTINUOUS CO-ORDINATED PROXIMITY BY VERIFICATION OF NEAR-FIELD COMMUNICATIONS LINK METHOD

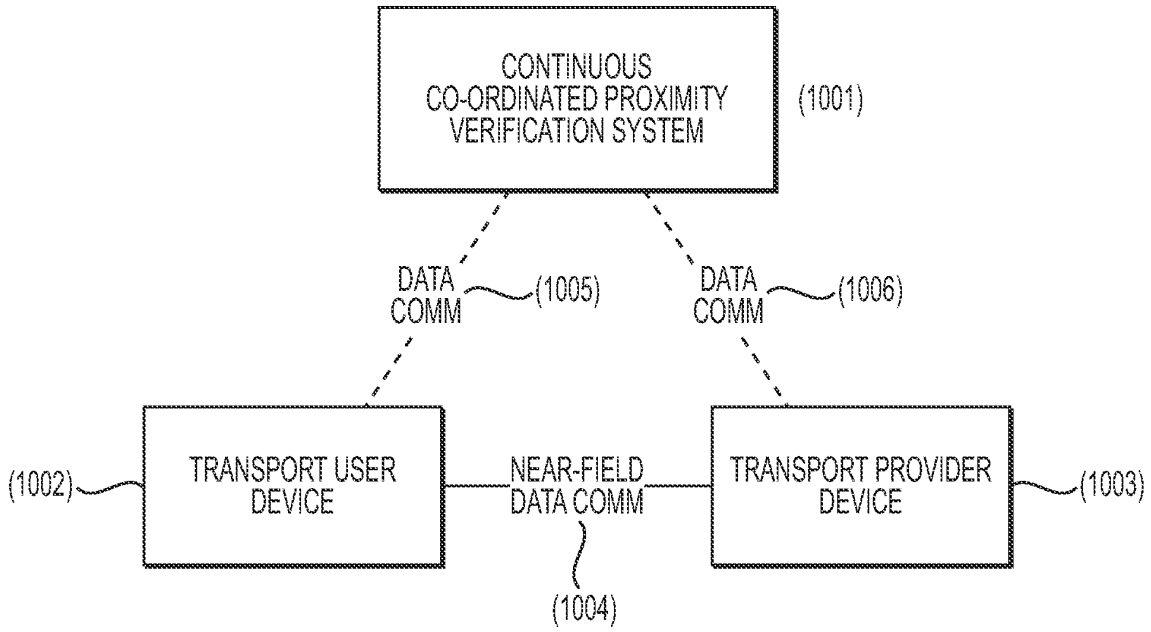


FIGURE 11b. METHOD 2 OF CONTINUOUS CO-ORDINATED PROXIMITY VIA VERIFICATION OF NEAR-FIELD COMMUNICATIONS LINK

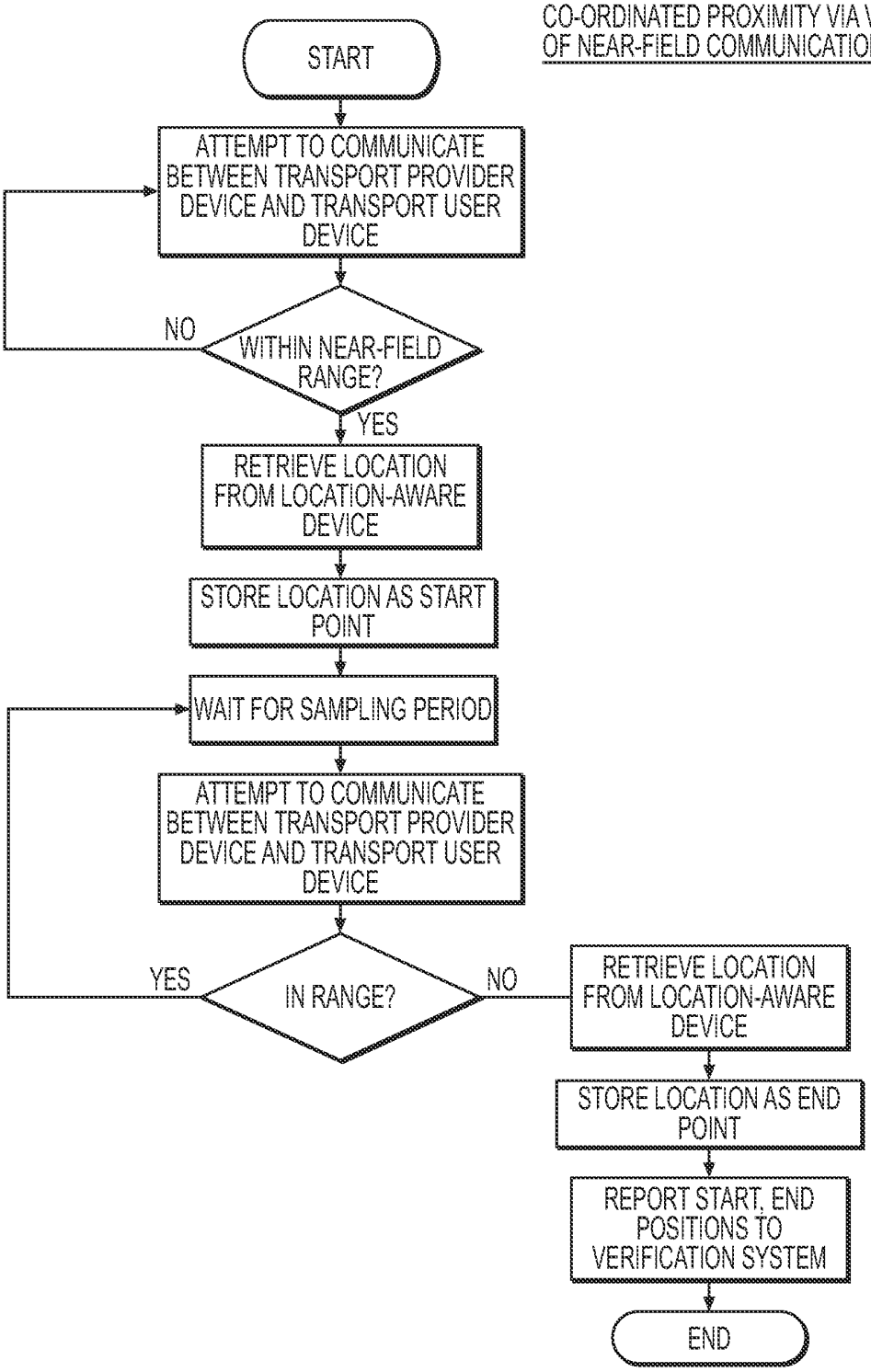


FIGURE 12a. ACCESS CONTROL SYSTEM

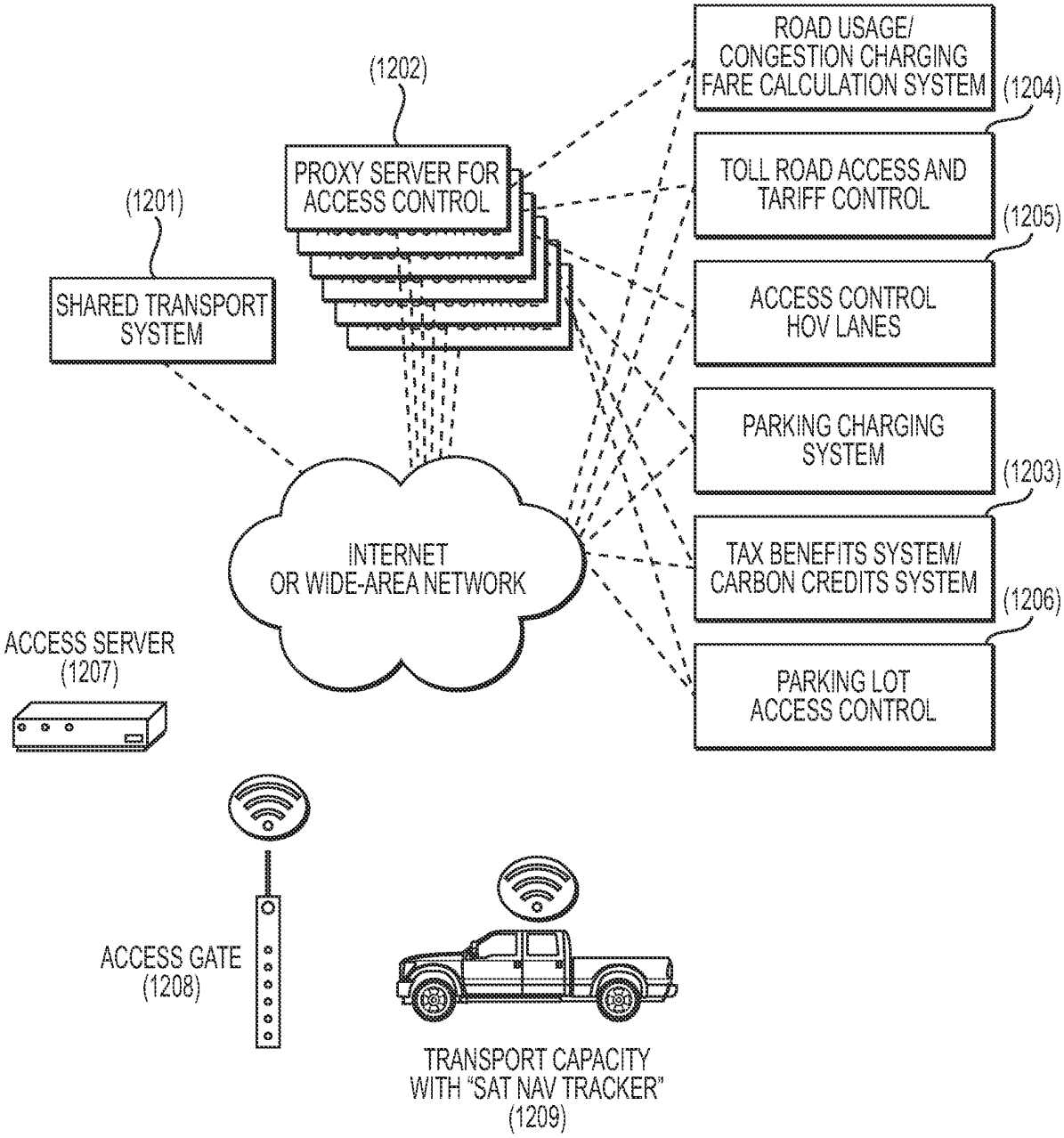


FIGURE 12b. ACCESS CONTROL SYSTEM, SERVER PUSH METHOD, SERVER-SIDE LOGIC

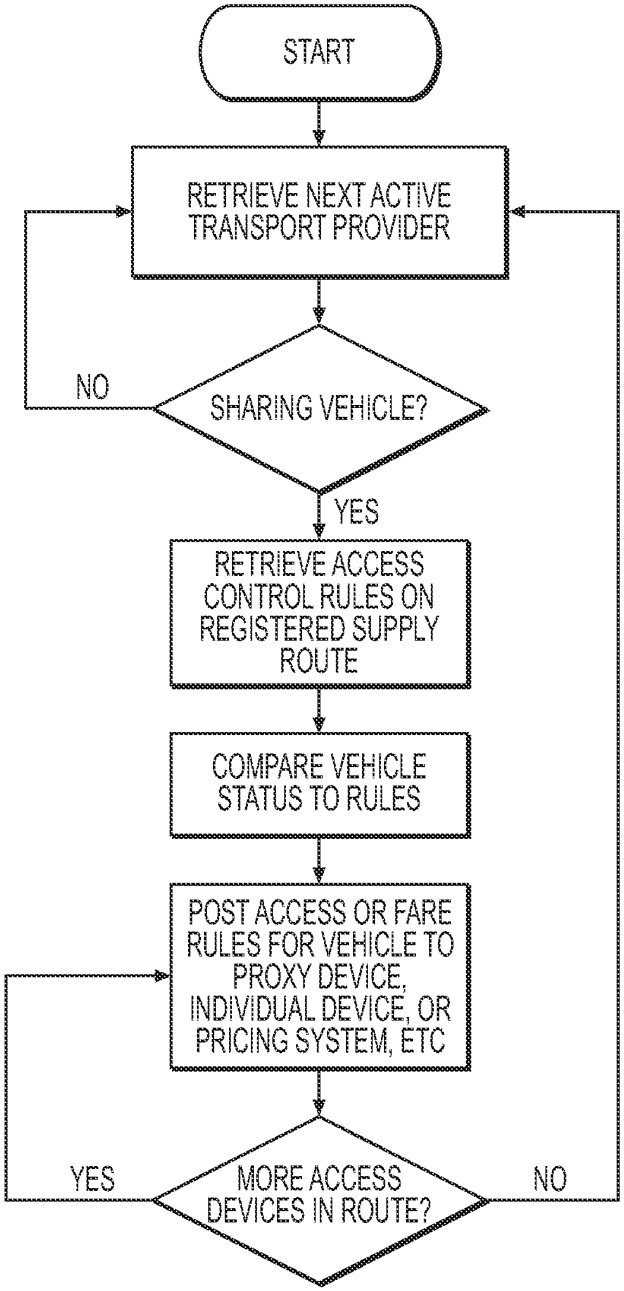


FIGURE 12c. ACCESS CONTROL SYSTEM, SERVER PUSH METHOD, CLIENT-SIDE LOGIC

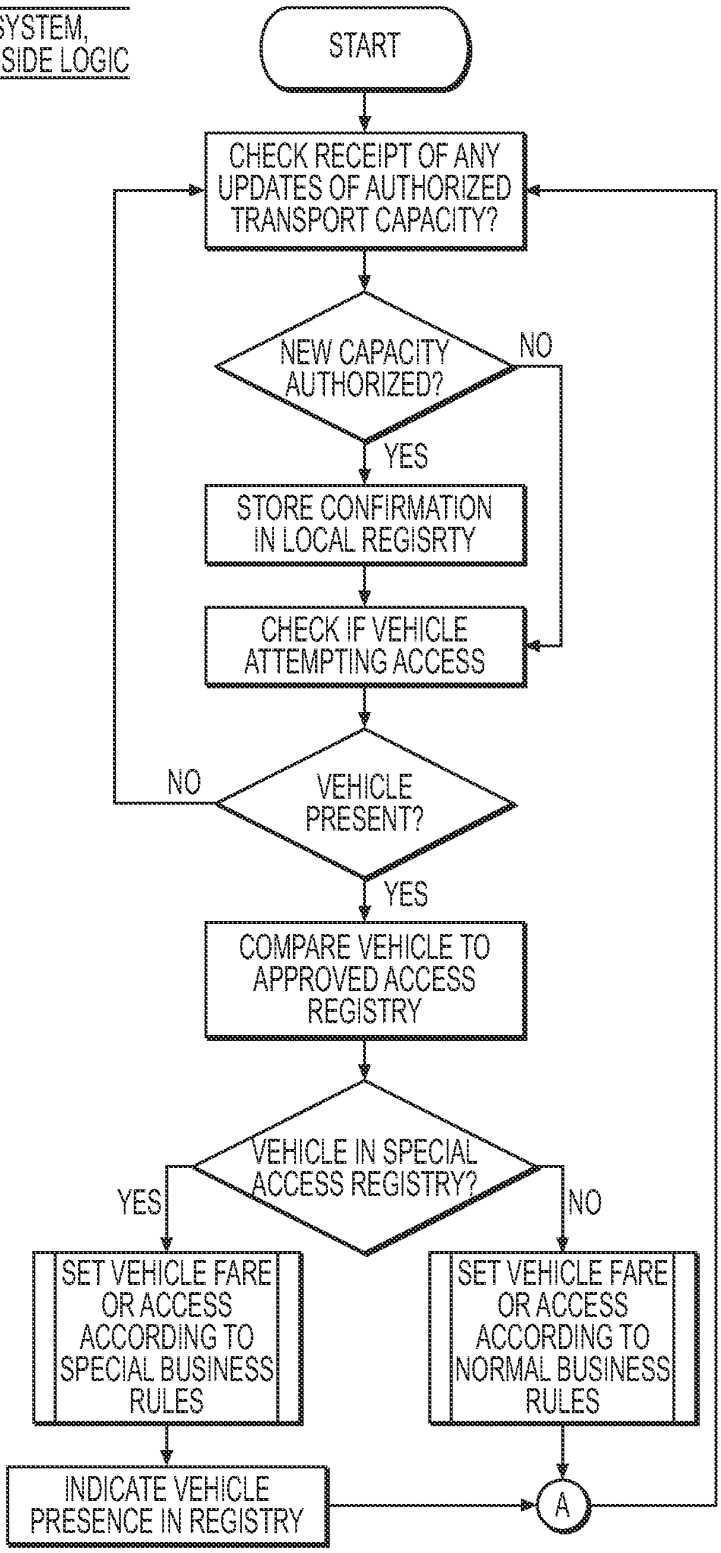


FIGURE 12d. ACCESS CONTROL SYSTEM, CLIENT PULL METHOD, CENTRAL SERVER-SIDE LOGIC

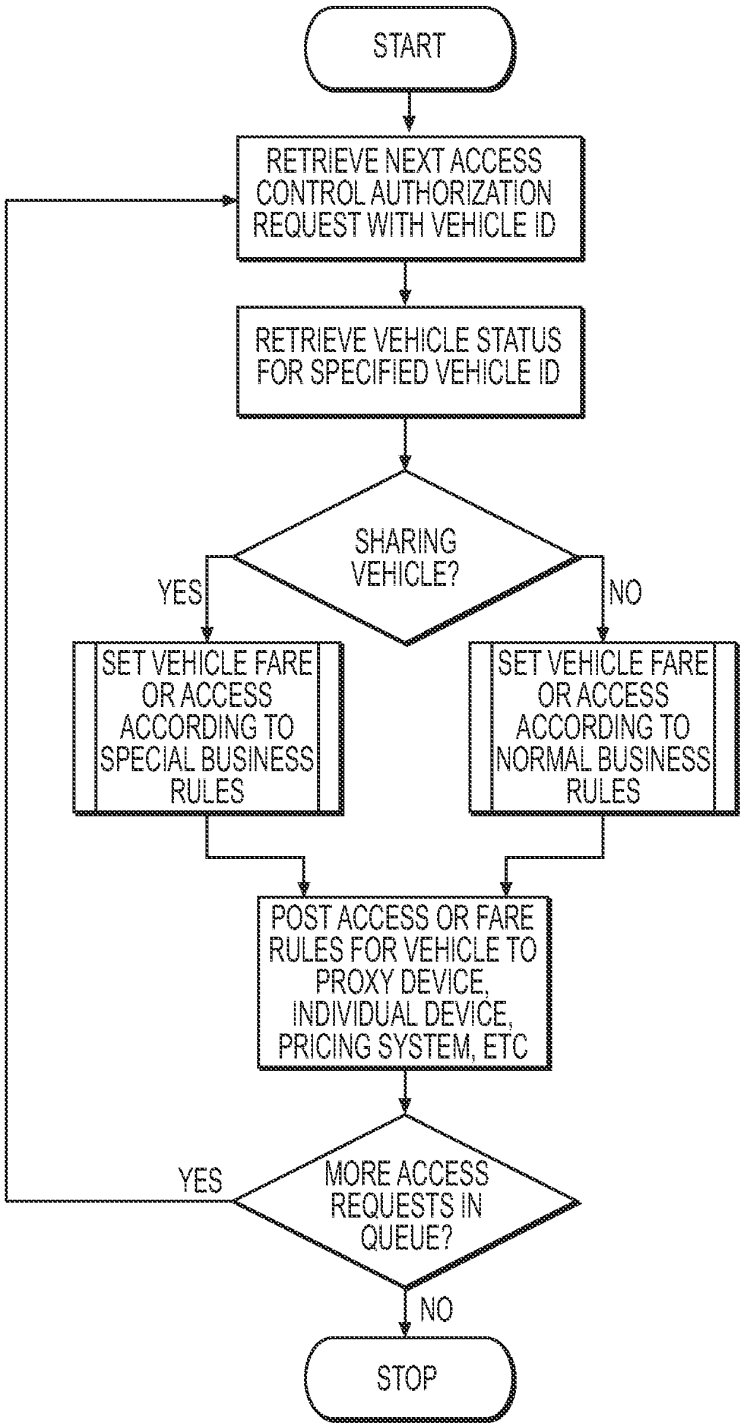


FIGURE 12e. ACCESS CONTROL SYSTEM, CLIENT PULL METHOD, CLIENT-SIDE LOGIC

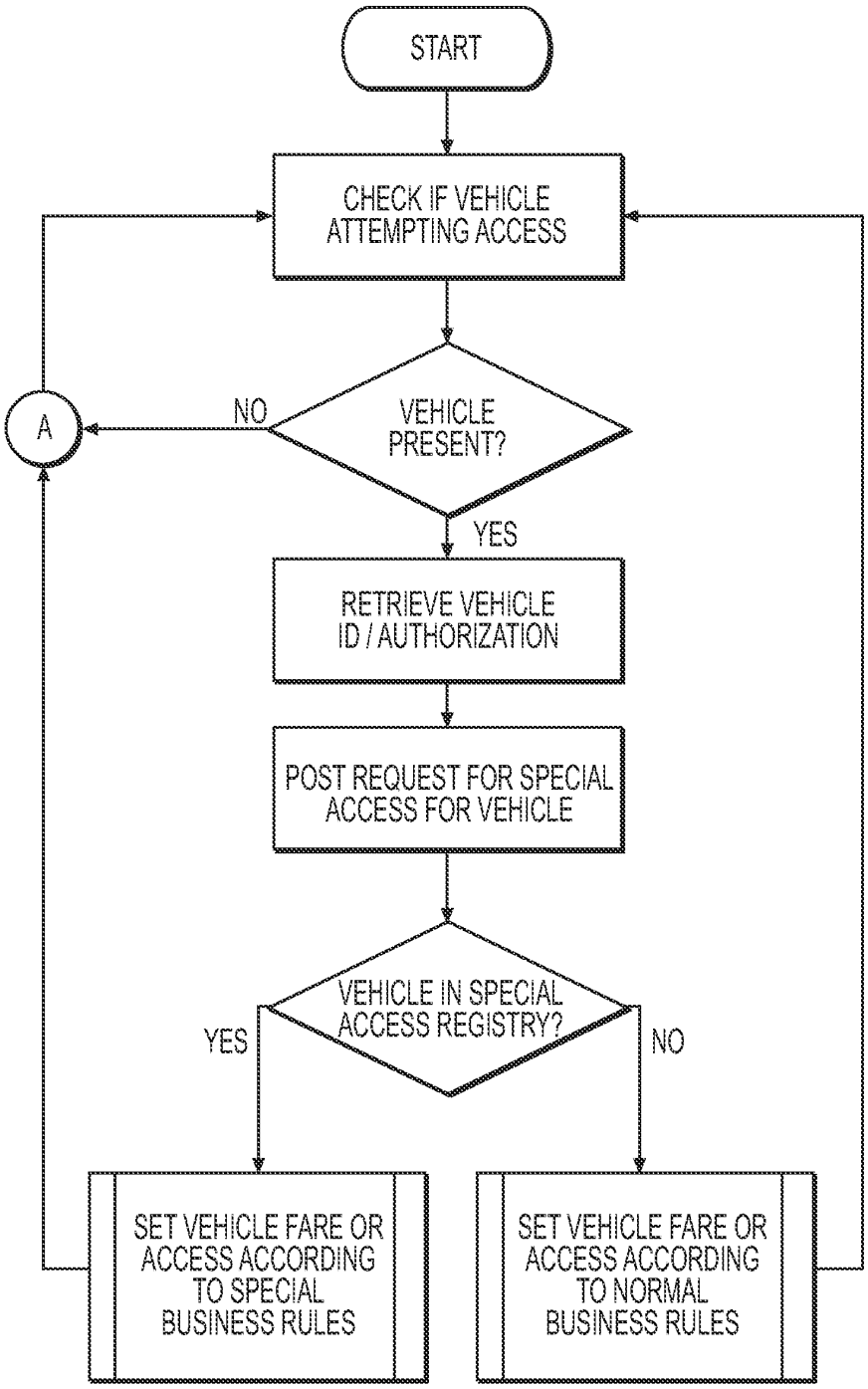


FIGURE 13. TRANSPORT COMMUNITY PROXY MESSAGE SERVICE

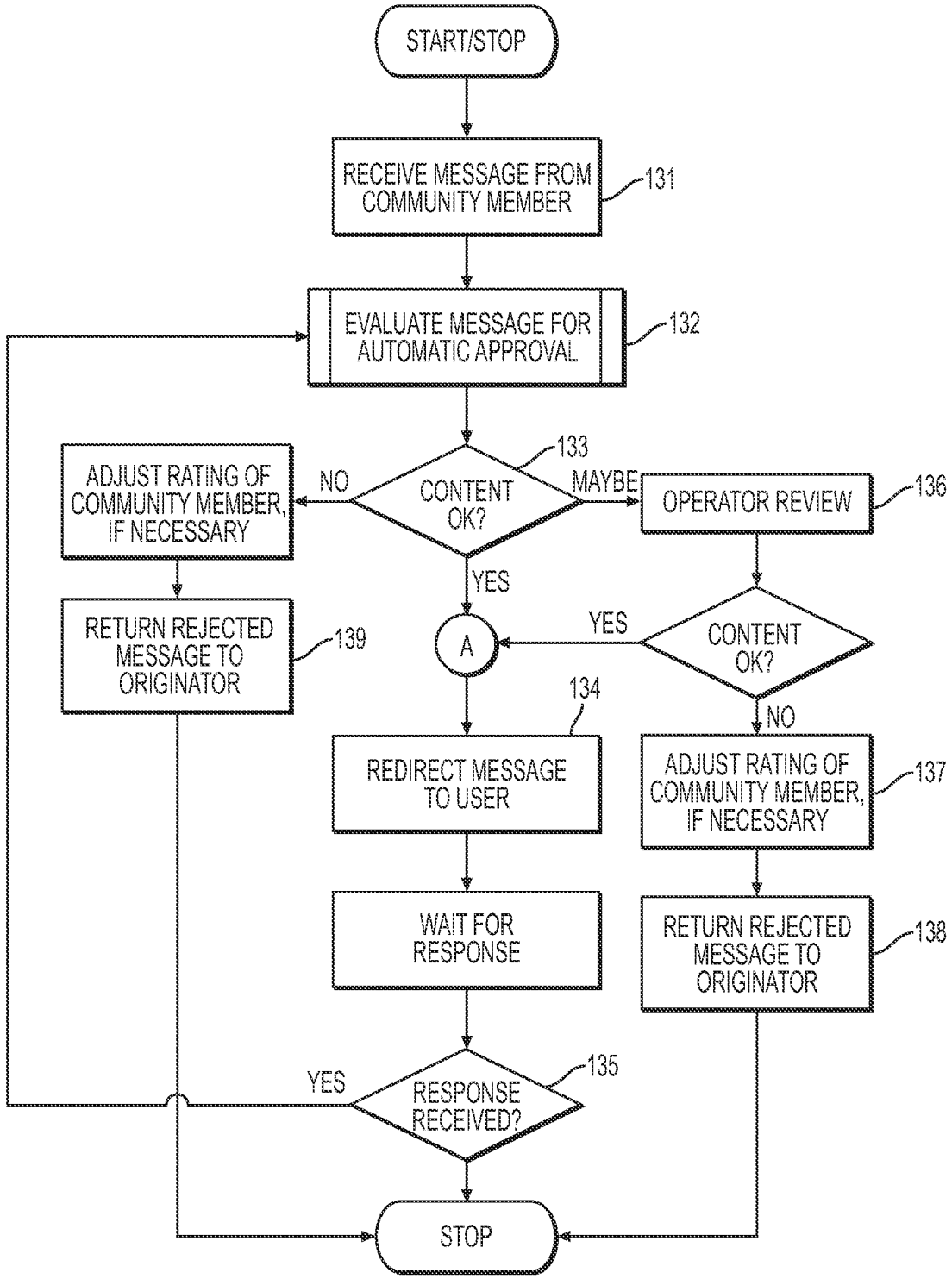


FIGURE 14a. FULL STREET, ACTIVE CAPACITY AND NODE REPRESENTATION

PICK-UP / DESTINATION LOCATION
START / DESTINATION POINTS
ACTIVE TRANSPORT CAPACITY
TRANSPORT USER

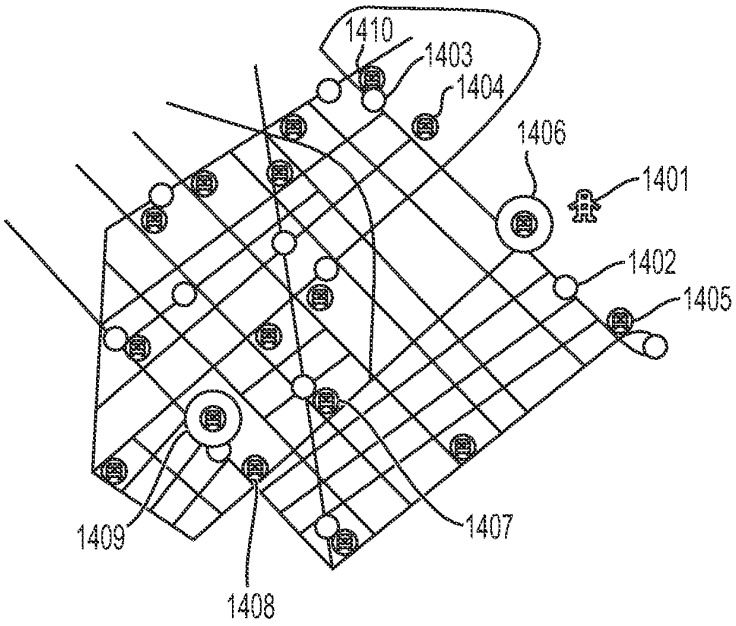


FIGURE 14b. NETWORK, ACTIVE STREET AND CAPACITY REPRESENTATION

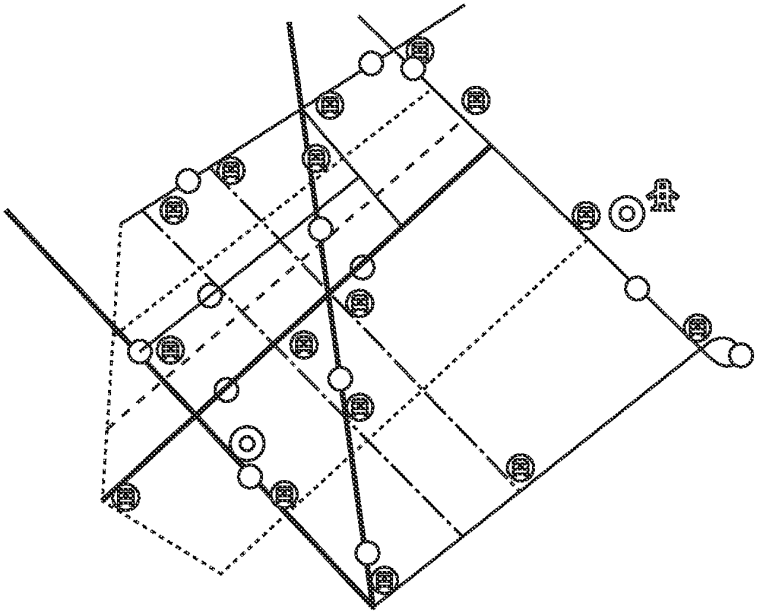


FIGURE 14c. NETWORK, ACTIVE ZERO TRANSFER STREET AND CAPACITY REPRESENTATION FROM SPECIFIC START POINT

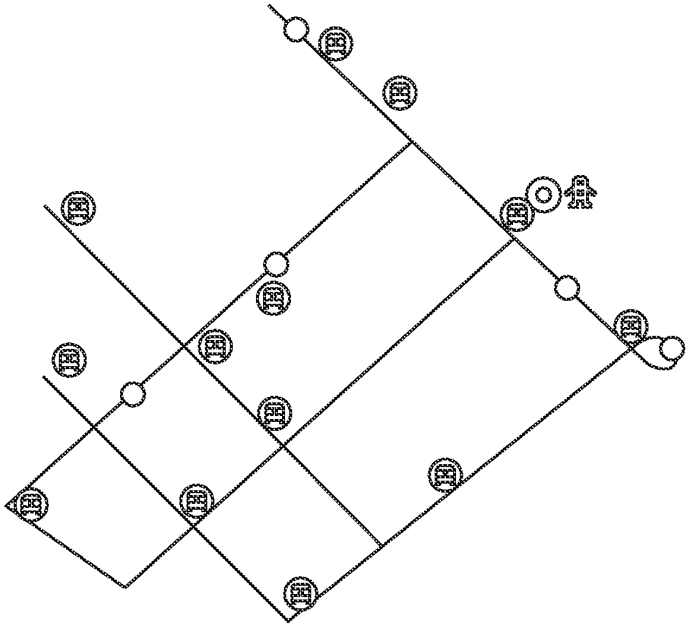


FIGURE 14d. STOCHASTIC NETWORK, TIME OF DAY CAPACITY REPRESENTATION

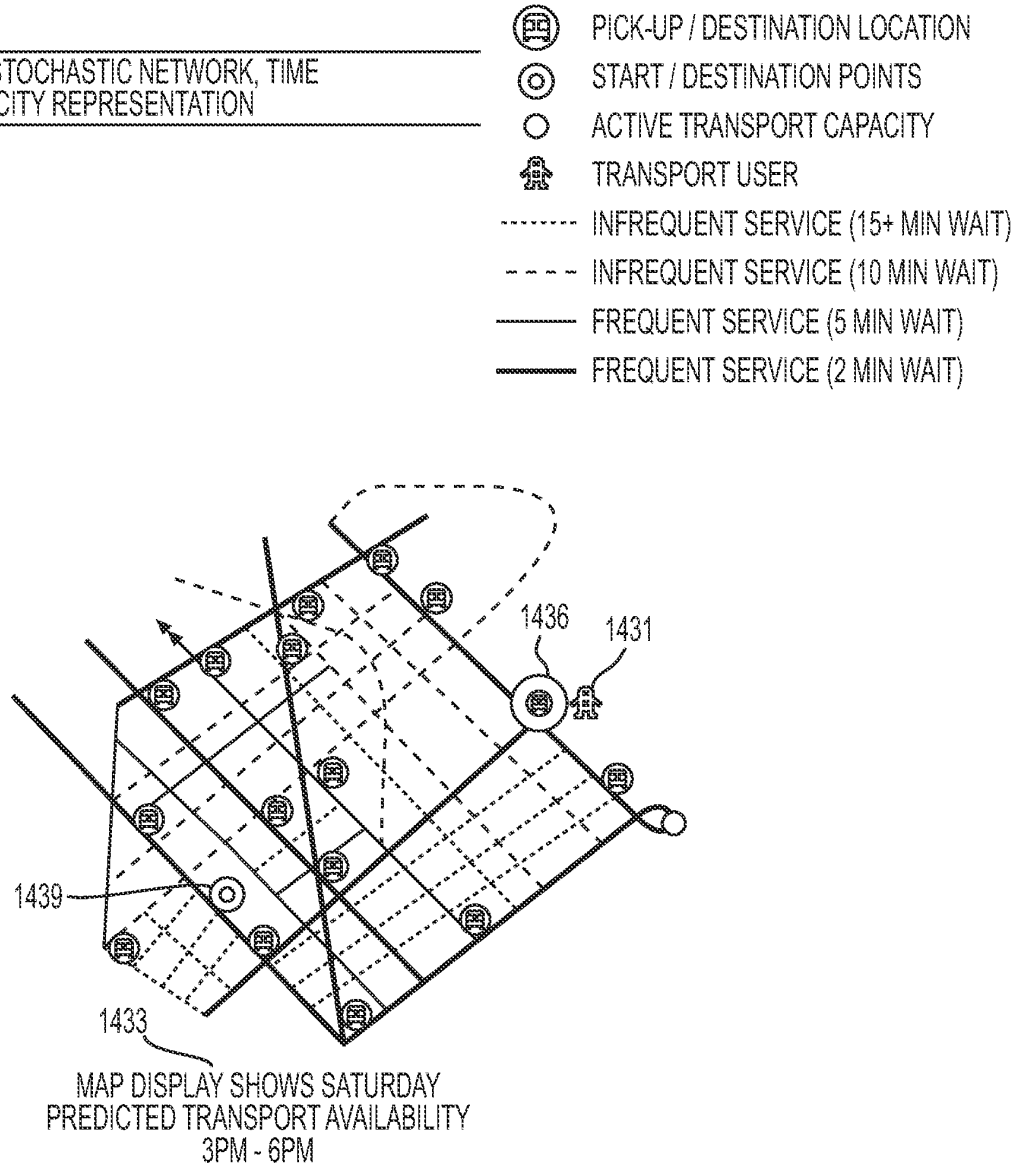


FIGURE 14e. STOCHASTIC NETWORK, ACTIVE STREET AND CAPACITY REPRESENTATION, SPECIFIC DEPARTURE POINT, OUTBOUND

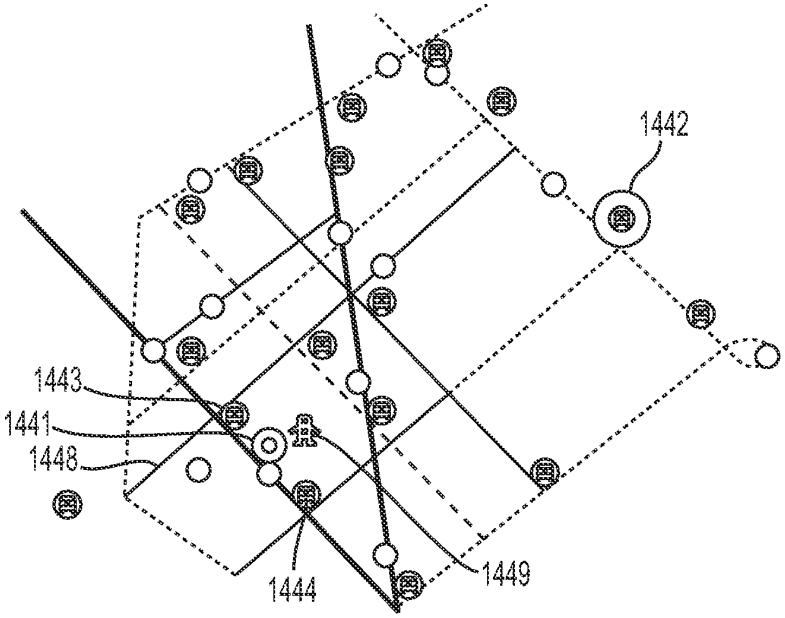


FIGURE 14f. NETWORK, WAIT TIME AND TRANSFER REPRESENTATION

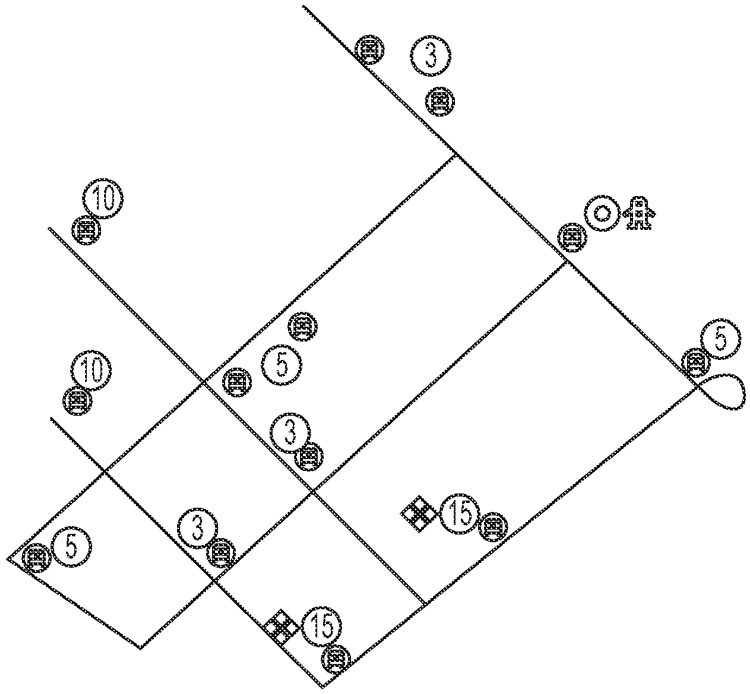


FIGURE 14g. STOCHASTIC NETWORK, TABULAR REPRESENTATION OF TIME OF DAY CAPACITY

(1471) (1472) (1475)

START POINT: 2142 14TH AVE;
DESTINATION: 200 BROADWAY, TROY

TIME OF DAY	DEPARTURE LOCATION	AVAILABILITY
5:00AM-6:30AM	13TH ST	15 MINUTES
	15TH ST	NO SERICE
6:30AM-7:30AM	13TH ST	5 MINUTES
	15TH ST	10 MINUTES
7:30AM-8:30AM	13TH ST	3 MINUTES
	15TH ST	5 MINUTES
(1473) 8:30AM-10:00AM (1474)	13TH ST	5 MINUTES
	15TH ST	5 MINUTES
10:00AM-4:30PM	13TH ST	10 MINUTES
	15TH ST	15 MINUTES
4:30PM-7:30PM	13TH ST	5 MINUTES
	15TH ST	5 MINUTES
7:30PM-10:30PM	13TH ST	5 MINUTES
	15TH ST	15 MINUTES
10:30PM-2:30AM	13TH ST	15 MINUTES
	15TH ST	1 HOUR
2:30AM-5:00AM	13TH ST	NO SERVICE
	15TH ST	NO SERVICE

FIGURE 14h. COMBINATION REAL-TIME & STOCHASTIC NETWORK DEPARTURE BOARD FOR SHARED TRANSPORT NETWORK

(1481)

START POINT: 2142 14TH AVE

(1485) (1483) (1485)

DESTINATION (VIA POINTS)	DEPARTURE LOCATION	DEPARTURE (ESTIMATED)
TROY CITY CENTER	13TH ST	3 MINUTES
RENSSELAER (STATE ST, WATERVLIET)	15TH ST	5 MINUTES
COHOES (GREEN ISLAND, WATERVLIET)	13TH ST	(EVERY 5 MINUTES)
ALBANY STREET	13TH ST	(EVERY 15 MINUTES)
BROADWAY	15TH ST	(EVERY 3 MINUTES)

(1486)

(1482) (1488) (1487)

FIGURE 14i. REAL-TIME JOURNEY PLANNER FOR SHARED TRANSPORT NETWORK, FIXED START & DESTINATION POINTS, TABULAR REPRESENTATION

(1491) (1492) (1494) (1496) (1497) (1495)

START POINT: ESSEX FELLS, NJ
DESTINATION: 222 E 32ND ST, NEW YORK
DEPARTURE TIME: NOW (9:22AM), DISTANCE: 22 MILES

OPTIONS (1493)	DEPARTURE/ ARRIVAL	DEPARTURE (ESTIMATED)	COST	ARRIVAL TIME
OPTION 1: SHARED TRANSPORT	ROSELAND AVE/ 3RD AVE & 32ND	3 MINUTES	$7.80	10:15 AM
OPTION 2: SHARED TRANSPORT + PATH + SUBWAY (1498)	BLOOMFIELD AVE/ PARK AVE & 34TH	(EVERY 5 MINUTES)	$6.50	10:38 AM
OPTION 3: BUS + SHARED TRANSPORT	BLOOMFIELD AVE/ 2ND AVE & 32ND	(EVERY 1 HOUR, NEXT 9:35 AM)	$6.20	10:45 AM

PATENT
Customer No.: 108449
Attorney Docket No.: 00199-0001-24000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re § 1.53(b) continuation application of U.S. Application No. 16/670,220:	)	Parent Art Unit: 2648
Sean O'SULLIVAN	)	Parent Examiner: Keith Ferguson
Application No.: Not Yet Assigned	)	
Filed: Concurrently Herewith	)	Confirmation No.: Not Yet Assigned
For: SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE	)	***VIA EFS-WEB***

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. § 1.97(b)

Pursuant to 37 C.F.R. §§ 1.56 and 1.97(b), Applicant brings to the attention of the Examiner the documents on the attached IDS Form PTO/SB/08. This Information Disclosure Statement is being filed concurrently with the above-referenced application.

Copies of the U.S. patents and patent publications are not enclosed. The listed foreign patent documents and non-patent literature document are all of record in prior Application No. 16/670,220 filed on October 31, 2019, Application No. 15/998,864 filed on August 17, 2018, and Application No. 12/924,487 filed on September 28, 2010, upon which Applicant relies for the benefits provided in 35 U.S.C. § 120. Accordingly, copies of the foreign patent documents and non-patent literature document are not enclosed.

Applicant respectfully requests that the Examiner consider the listed documents and indicate that they were considered by making appropriate notations on the attached form.

This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that each or all of the listed documents are material or constitute "prior art." If the Examiner applies any of the documents as prior art against any claim in the application and Applicant determines that the cited documents do not constitute "prior art" under United States law, Applicant reserves the right to present to the U.S. Patent and Trademark Office the relevant facts and law regarding the appropriate status of such documents.

Applicant further reserves the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should one or more of the documents be applied against the claims of the present application.

If there is any fee due in connection with the filing of this Statement that is not otherwise provided with this filing, please charge the fee to Deposit Account No. 50-5906.

Respectfully submitted,

BOOKOFF McANDREWS, PLLC
Customer Number: 108449

Dated: January 22, 2021

By: /Joel S. Simon/
Joel S. Simon
Reg. No. 70,271
(202) 808-3560

PATENT
Customer No.: 108449
Attorney Docket No.: 00199-0001-24000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re § 1.53(b) continuation application of U.S. Application No. 16/670,220:	)	Parent Art Unit: 2648
Sean O'SULLIVAN	)	Parent Examiner: Keith Ferguson
Application No.: Not Yet Assigned	)	
Filed: Concurrently Herewith	)	Confirmation No.: Not Yet Assigned
For: SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE	)	***VIA EFS-WEB***

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

PRELIMINARY AMENDMENT

Prior to examination, please amend this application as follows:

Amendments to the Drawings begin on page 2.

Amendments to the Specification begin on page 3.

Amendments to the Claims are reflected in the listing of claims beginning on page 4.

Remarks begin on page 13.

Attachments: Third-two (32) sheets of Replacement Drawings.

AMENDMENTS TO THE DRAWINGS:

Please replace the previously-filed sheets of drawings of Figures 1-14i with the attached thirty-two (32) replacement sheets.

AMENDMENTS TO THE SPECIFICATION:

Please replace the title with the following amended title:

- - ~~SHARED TRANSPORT SYSTEM AND SERVICE NETWORK~~ SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE - -

Please amend the first paragraph on page 1 of the specification as follows:

This application is a continuation of and claims the benefit of priority to U.S. Nonprovisional Patent Application No.16/670,220, filed October 31, 2019, which is a continuation of and claims the benefit of priority to U.S. Nonprovisional Patent Application No. 16/564,819, filed September 9, 2019, now U.S. Patent No. 10,672,271, issued June 2, 2020, which is a continuation of and claims the benefit of priority to U.S. Nonprovisional Patent Application No. 16/197,953, filed November 21, 2018, now U.S. Patent No. 10,453,339, issued October 22, 2019, which is a continuation of and claims the benefit of priority to U.S. Nonprovisional Patent Application No. 15/998,864, filed August 17, 2018, which is a continuation of and claims the benefit of priority to U.S. Nonprovisional Patent Application No. 12/924,487, filed September 28, 2010, now U.S. Patent No. 10,083,608, issued September 25, 2018, which is a division of and claims the benefit of priority to U.S. Nonprovisional Patent Application No. 12/069,656, filed February 12, 2008, now U.S. Patent No. 7,840,427, issued November 23, 2010, which claims priority ~~of~~ to U.S. Provisional Patent Application No. 60/900,808, filed February 12, 2007, which are incorporated herein by reference in their entireties ~~and is a division of Serial Number 12/069,656 filed February 12, 2008~~.

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Cancelled)

2. (New) A method of sharing transportation employing a shared transport system, the method comprising:

receiving, by the shared transport system, provider route information associated with travel of a transport provider, the provider route information based on a (i) destination of the transport provider entered via a transport provider device of the transport provider and (ii) location data associated with the transport provider device;

receiving, by the shared transport system, demand route information associated with one or more transport users, the demand route information including (i) location data associated with one or more transport user devices of the one or more transport users and (ii) one or more destinations of the one or more transport users entered via the one or more transport user devices;

matching, by the shared transport system, at least one transport user of the one or more transport users to the transport provider based on the demand route information and the provider route information;

determining, by the shared transport system, a pick-up location and a drop-off location of the at least one transport user based on the demand route information and the provider route information; and

transmitting, by the shared transport system, transport instructions to the transport provider device, the transport instructions including an adjustment to the provider route information based on the determined pick-up location and drop-off location.

3. (New) The method of claim 2, wherein:

the pick-up location is different from a location of the transport user device of the at least one transport user; and

the method further comprises transmitting, by the shared transport system, travel instructions to the transport user device of the at least one transport user, the travel instructions indicative of a route from the location of the transport user device to the pick-up location.

4. (New) The method of claim 2, wherein:

the drop-off location is different from a location of the destination of the at least one transport user; and

the method further comprises transmitting, by the shared transport system, travel instructions to the transport user device of the at least one transport user, the travel instructions indicative of a route from the drop-off location to the location of the destination.

5. (New) The method of claim 2, further comprising:

receiving, by the shared transport system, an indication that the at least one transport user has been picked up by the transport provider.

6. (New) The method of claim 2, further comprising:

receiving, by the shared transport system, an indication that the at least one transport user has been dropped off by the transport provider.

7. (New) The method of claim 2, wherein the adjustment to the provider route information based on the determined pick-up location and drop-off location includes a deviation in the travel of the transport provider.

8. (New) The method of claim 2, further comprising:

in response to receiving the provider route information, registering a shared transport capacity of the transport provider with the shared transport system based on the provider route information.

9. (New) The method of claim 7, wherein the matching is further based on the deviation being below a predetermined deviation threshold.

10. (New) The method of claim 2, wherein the transport instructions are configured to cause the transport provider device to display the adjustment to the provider route information.

11. (New) The method of claim 2, wherein matching the at least one transport user to the transport provider includes:

determining a representation of the provider route information as a first plurality of coordinates;

determining a representation of the demand route information as a second plurality of coordinates; and

comparing the first plurality of coordinates to the second plurality of coordinates.

12. (New) The method of claim 2, wherein matching the at least one transport user to the transport provider includes:

determining a demand route of the at least one transport user based on the location data associated with the transport user device of the at least one transport user and the destination of the at least one transport user; and

determining a provider route of the transport provider based on the location data associated with the transport provider device and the destination of the transport provider; and

comparing the demand route of the at least one transport user with the provider route of the transport provider.

13. (New) The method of claim 2, wherein matching the at least one transport user to the transport provider includes determining, based on the demand route information and the provider route information, that the pick-up location and the drop-off location are within a predetermined proximity to the travel of the transport provider.

14. (New) The method of claim 2, wherein matching the at least one transport user to the transport provider includes:

matching the transport provider to a plurality of transport users;

transmitting information associated with transport of the plurality of transport users to the transport provider device; and

receiving a selection of the at least one transport user from the transport provider device.

15. (New) A method of sharing transportation employing a shared transport system, the method comprising:

receiving, by the shared transport system, demand route information from a transport user device of a transport user, the demand route information including location data associated with the transport user device and a destination of the transport user;

receiving, by the shared transport system, provider route information associated with travel of one or more transport providers, the provider route information based on one or more destinations of the one or more transport providers entered via one or more transport provider devices of the one or more transport providers and location data associated with the one or more transport provider devices;

matching, by the shared transport system, the transport user to one of the one or more transport providers based on the demand route information and the provider route information;

determining, by the shared transport system, a pick-up location and a drop-off location of the transport user based on the demand route information and the provider route information associated with the matched one of the one or more transport providers;

transmitting, by the shared transport system, transport instructions to the transport user device, the transport instructions including information indicative of the pick-up location, the drop-off location, and the matched one of the one or more transport providers.

16. (New) The method of claim 15, wherein matching the transport user to the one of the one or more transport providers includes:

matching the transport user to a plurality of transport providers;

transmitting information associated with travel of the plurality of transport providers to the transport user device; and

receiving a selection of the one of the plurality of transport providers from the transport user device.

17. (New) The method of claim 15, wherein:

the pick-up location is different from a location of the transport user; and

the method further comprises transmitting travel instructions to the transport user device, the travel instructions indicative of a route from the location of the transport user device to the pick-up location.

18. (New) The method of claim 15, wherein:

the drop-off location is different from a location of the destination of the transport user; and

the method further comprises transmitting travel instructions to the transport user device, the travel instructions indicative of a route from the drop-off location to the location of the destination.

19. (New) A shared transport system, comprising:

one or more processors; and

memory operatively connected to the one or more processors, and storing instructions executable by the one or more processors to perform operations including:

receiving, by the shared transport system, provider route information associated with travel of one or more transport providers, the provider route information including:

one or more destinations of the one or more transport providers entered via one or more transport provider devices of the one or more transport providers; and

location data associated with the one or more transport provider devices;

receiving, by the shared transport system, demand route information associated with one or more transport users, the demand route information including:

location data associated with one or more transport user devices of the one or more transport users: and

one or more destinations of the one or more transport users entered via the one or more transport user devices;

matching, by the shared transport system, at least one transport user of the one or more transport users to at least one transport provider of the one or more transport providers based on the demand route information and the provider route information;

determining, by the shared transport system, a pick-up location and a drop-off location of the at least one transport user based on the demand route information of the at least one transport user and the provider route information of the at least one transport provider; and

transmitting, by the shared transport system, first transport instructions to the transport provider device of the at least one transport provider, the first transport instructions including an adjustment to the provider route information based on the determined pick-up location and drop-off location.

20. (New) The shared transport system of claim 19, wherein the operations further include transmitting second transport instructions to the transport user device of the at least one transport user, the second transport instructions including information indicative of the pick-up location, the drop-off location, and the at least one transport provider.

21. (New) The shared transport system of claim 19, wherein the adjustment to the provider route information based on the determined pick-up location and drop-off location includes a deviation in the travel of the at least one transport provider.

REMARKS

By this Preliminary Amendment, Applicant amends the specification to insert reference to related applications, to which this application claims the benefit of priority. Additionally, Applicant submits replacement drawing sheets that include clear versions of Figures 1-14i. The replacement drawing sheets submitted herewith contain no new matter. Furthermore, Applicant cancels claim 1 and adds claims 2-21. The claims are fully supported by the application as-filed and contain no new matter.

This application claims the benefit of an earlier filed U.S. nonprovisional patent application. To the extent that the claims in this application have the same or similar terms to those in the parent application, Applicant hereby rescinds any disclaimers originating from arguments made during prosecution of the parent application. Applicant invites the Examiner to revisit the relevant prior art of the parent application. *Hakim v. Cannon Avent Group*, 479 F.3d 1313 (Fed. Cir. 2007).

If there is any fee due in connection with the filing of this Amendment that is not otherwise provided herewith, please charge the fee to Deposit Account No. 50-5906.

Respectfully submitted,

BOOKOFF McANDREWS, PLLC
Customer Number: 108449

Dated: January 22, 2021

By: /Joel S. Simon/
Joel S. Simon
Reg. No. 70271
(202) 808-3560

PATENT
Customer No.: 108449
Attorney Docket No.: 00199-0001-24000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re § 1.53(b) continuation application of U.S. Application No. 16/670,220 of:	Parent Art Unit: 2648
Sean O'SULLIVAN	Parent Examiner: Keith Ferguson
Application No.: Not Yet Assigned	
Filed: Concurrently Herewith	Confirmation No.: Not Yet Assigned
For: SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE	***VIA EFS-WEB***

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

TRANSMITTAL OF CONTINUATION PATENT APPLICATION FILED UNDER 37 CFR § 1.53(b)

This is a request for filing a continuation application under 37 CFR §1.53(b) of pending prior U.S. Nonprovisional Patent Application No. 16/670,220, filed October 31, 2019, which is a continuation of U.S. Nonprovisional Patent Application No. 16/564,819, filed September 9, 2019, now U.S. Patent No. 10,672,271, which is a continuation of U.S. Nonprovisional Patent Application No. 16/197,953, filed November 21, 2018, now U.S. Patent No. 10,453,339, which is a continuation of U.S. Nonprovisional Patent Application No. 15/998,864, filed August 17, 2018, which is a continuation of U.S. Nonprovisional Patent Application No. 12/924,487, filed September 28, 2010, now U.S. Patent No. 10,083,608, which is a division of U.S. Nonprovisional Application No. 12/069,656, filed February 12, 2008, now U.S. Patent No. 7,840,427, which claims priority to U.S. Provisional Application No. 60/900,808, filed February 12, 2007, which are incorporated herein by reference in their entireties.

Enclosed is a new continuation application, including the following:

1. A complete copy of prior U.S. Application No. 16/670,220, as filed on October 31, 2019, including the specification, claims, and abstract (62 pages), and drawings (32 sheets).

2. Application Data Sheet (ADS) in accordance with 37 CFR § 1.76 (9 pages).

3. Executed Declaration (1 page).

4. Preliminary Amendment (13 pages).

5. Power of Attorney and Transmittal (2 pages).

6. Information Disclosure Statement (2 pages) and SB/08 (5 pages).

7. The total required fees of $830.00, as set forth below, are being paid electronically by credit card at the time of filing.

Filing fees are being paid electronically as follows:

Search Fee					$700	$ 700.00
Examination Fee					$800	$ 800.00
	Number of Claims		Basic	Extra		
Total Claims	20	-	20		x $100	$ 0.00
Independent Claims	3	-	3		x $460	$ 0.00
☐ Presentation of Multiple Dep. Claim(s)					$860	
Size Fee: EFS-Web Filing Total Application Pages (specification, drawings, printed sequence or computer listing, preliminary amendment)	(107 pages X .75 – 100) ÷ 50 =0* 0* x 420 = $0 *Rounded up to next whole number					$ 0.00
Subtotal						$ 1500.00
Reduction by 1/2 if small entity						- 750.00
Basic Filing Fee for Electronic Small Entity					$80	$ 80.00
TOTAL FEES DUE						$ 830.00

This application has been assigned to **Carma Technology Limited**. The assignment document will be recorded separately. Please accord this application an application number and filing date.

If there is any fee due in connection with the filing of this application that is not otherwise provided with this filing, please charge the fee to Deposit Account No. 50-5906. In addition, the Commissioner is hereby authorized to charge any additional fees due and any other fees due under 37 C.F.R. § 1.16 or § 1.17 during the pendency of this application to Deposit Account No. 50-5906.

Please address all correspondence with respect to this application to: **Bookoff McAndrews, PLLC, Customer No. 108449**.

Respectfully submitted,

BOOKOFF McANDREWS, PLLC

Dated: January 22, 2021

By: /Joel S. Simon/
Joel S. Simon
Reg. No. 70271
(202) 808-3560

PTO/AIA/14 (02-18)
Approved for use through 11/30/2020. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	00199-0001-24000
	Application Number	
Title of Invention	SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2:

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Sean		O'SULLIVAN	

Residence Information (Select One) ● US Residency Non US Residency Active US Military Service

City	Princeton	State/Province	NJ	Country of Residence	US

Mailing Address of Inventor:

Address 1	174 Nassau Street		
Address 2	#3000		
City	Princeton	**State/Province**	NJ
Postal Code	08542	**Country**	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ **An Address is being provided for the correspondence Information of this application.**

Customer Number	108449		
Email Address	docketing@bomcip.com	Add Email	Remove Email

Application Information:

Title of the Invention	SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE		
Attorney Docket Number	00199-0001-24000	**Small Entity Status Claimed**	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	32	**Suggested Figure for Publication (if any)**	

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	00199-0001-24000
	Application Number	
Title of Invention	SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE	

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	● Customer Number	US Patent Practitioner	◯ Limited Recognition (37 CFR 11.9)
Customer Number	108449		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.
When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation of	16/670220	2019-10-31

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	00199-0001-24000
	Application Number	
Title of Invention	SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE	

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16/670220	Continuation of	16/564819	2019-09-09	10672271	2020-06-02
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16/564819	Continuation of	16/197953	2018-11-21	10453339	2019-10-22
Prior Application Status	Pending				Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)		
16/197953	Continuation of	15/998864	2018-08-17		
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15/998864	Continuation of	12/924487	2010-09-28	10083608	2018-09-25
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
12/924487	Division of	12/069656	2008-02-12	7840427	2010-11-23
Prior Application Status	Expired				Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)		
12/069656	Claims benefit of provisional	60/900808	2007-02-12		

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button. Add

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)[i] the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Remove

Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Access Code[i] (if applicable)

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	00199-0001-24000
	Application Number	
Title of Invention	SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE	

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button. Add

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	00199-0001-24000
	Application Number	
Title of Invention	SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE	

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	00199-0001-24000
	Application Number	
Title of Invention	SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE	

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1 Remove

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

● Assignee	Legal Representative under 35 U.S.C. 117	Joint Inventor
Person to whom the inventor is obligated to assign.	Person who shows sufficient proprietary interest	

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor:

If the Applicant is an Organization check here. ☒

Organization Name	CARMA TECHNOLOGY LIMITED		
Mailing Address Information For Applicant:			
Address 1	Republic of Work		
Address 2	12 South Mall		
City	Cork City	**State/Province**	
Country	IE	Postal Code	T12 RD43
Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button. Add

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	00199-0001-24000
	Application Number	
Title of Invention	SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE	

Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

Remove

If the Assignee or Non-Applicant Assignee is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1			
Address 2			
City		**State/Province**	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button. Add

Signature:

Remove

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Joel S. Simon/			Date (YYYY-MM-DD)	2021-01-22
First Name	Joel S.	Last Name	Simon	Registration Number	70271

Additional Signature may be generated within this form by selecting the Add button. Add

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	00199-0001-24000
	Application Number	
Title of Invention	SYSTEMS AND METHODS FOR UTILIZING A SHARED TRANSPORT NETWORK WITH A TRANSPORT PROVIDER DESTINATION MODE	

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1 The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3 A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent CooperationTreaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Figure 1. Shared Transport Network System

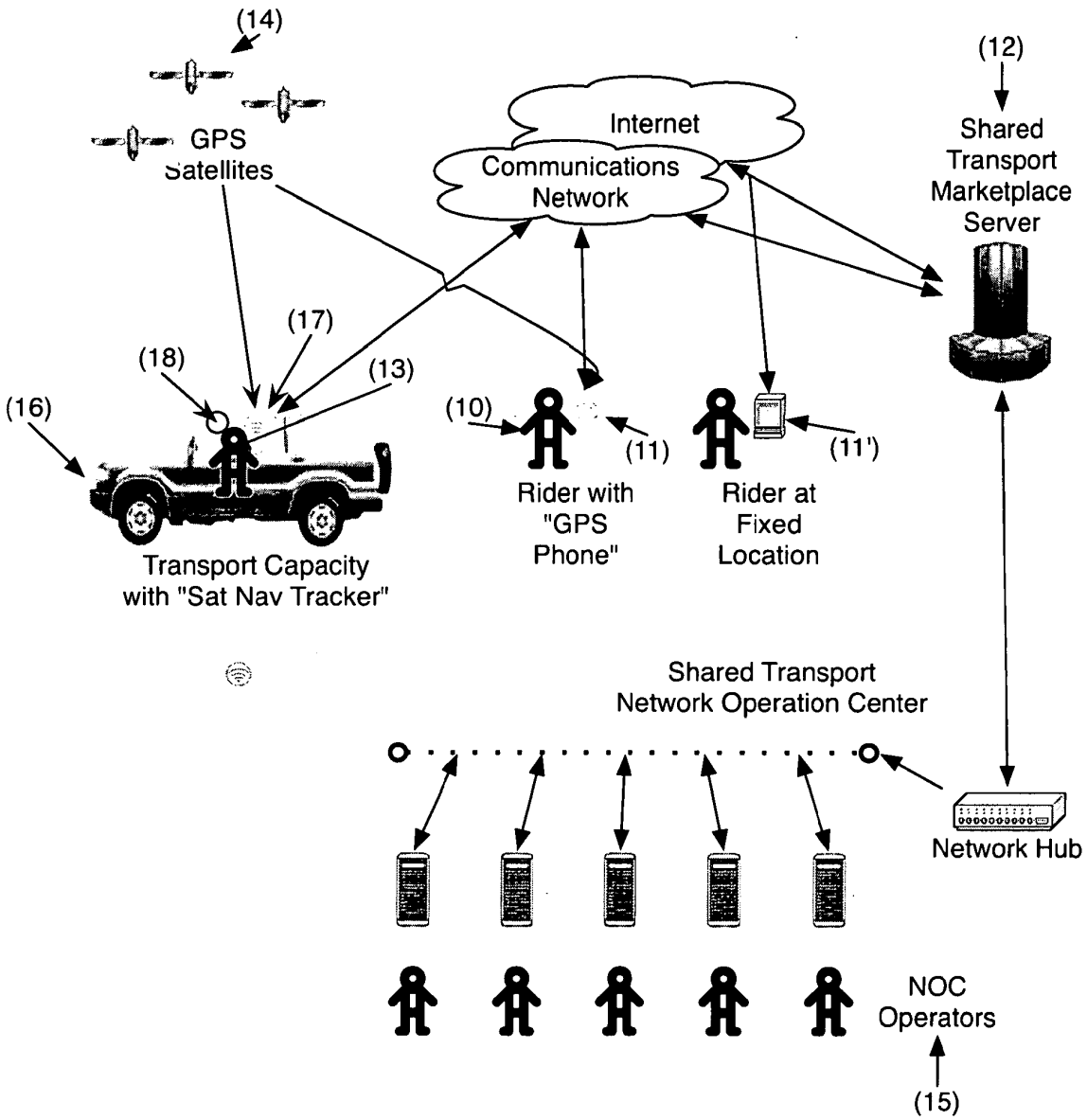


Figure 2. Transport Capacity Computing and Communications Components

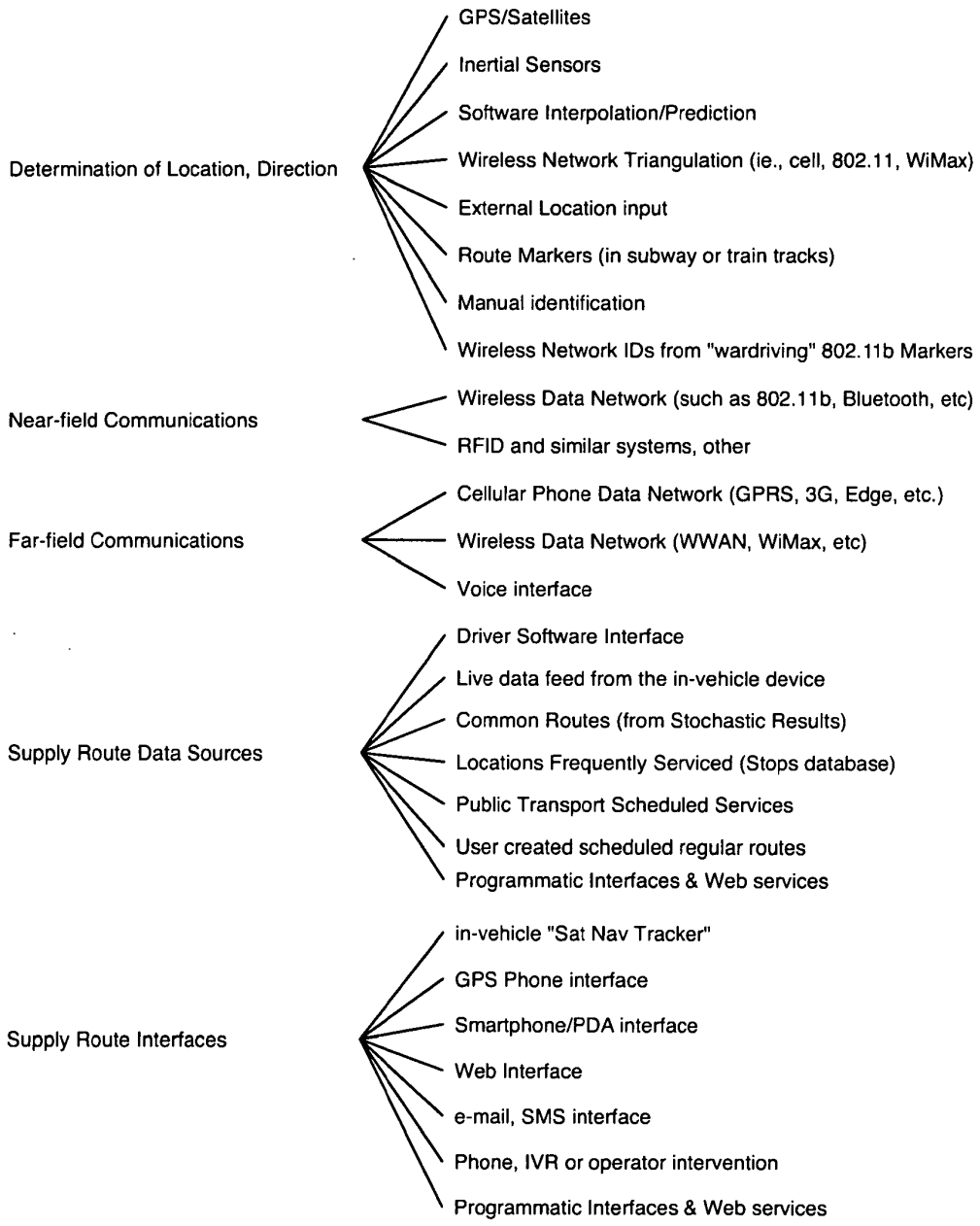


Figure 3. Rider Technology Components and Information Elements

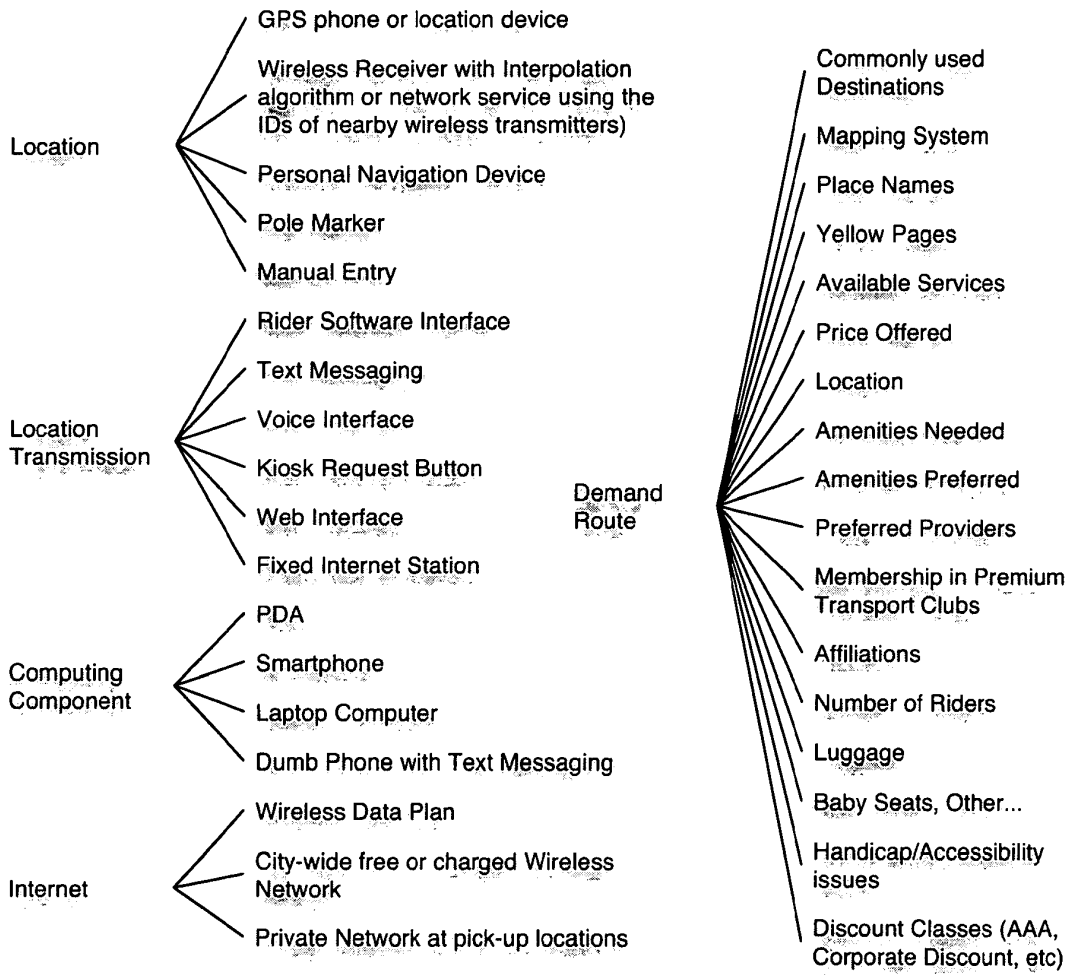
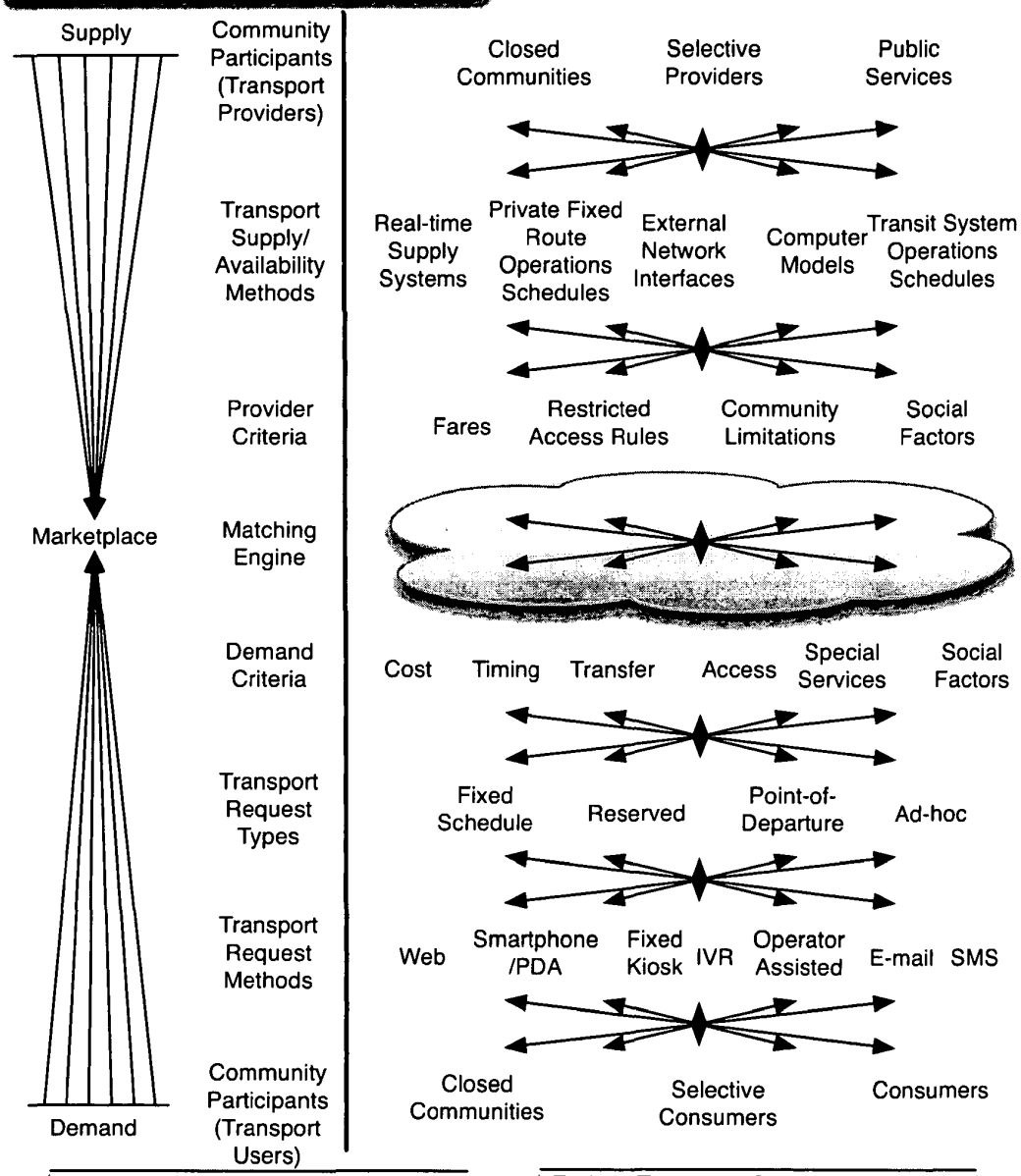


Figure 4. Shared Transport Marketplace



Public Shared Transport Providers
Bus Networks
Rail & Subway Networks
Jitney/Share Taxi Providers
Private Scheduled Service Bus

Freight Transport Providers
Private Package Transport Companies
National Postal Carriers
Independent Operators
Ad-hoc consumer

Closed Member Communities
School Bus Systems
Employee Shuttle Buses
Affiliations (social clubs, sports networks)

Dispatchable, non-Shared Transport
Taxi Companies
Private Hackney operators
Premium service transport operator

Figure 5a. Rider Experience Flowchart

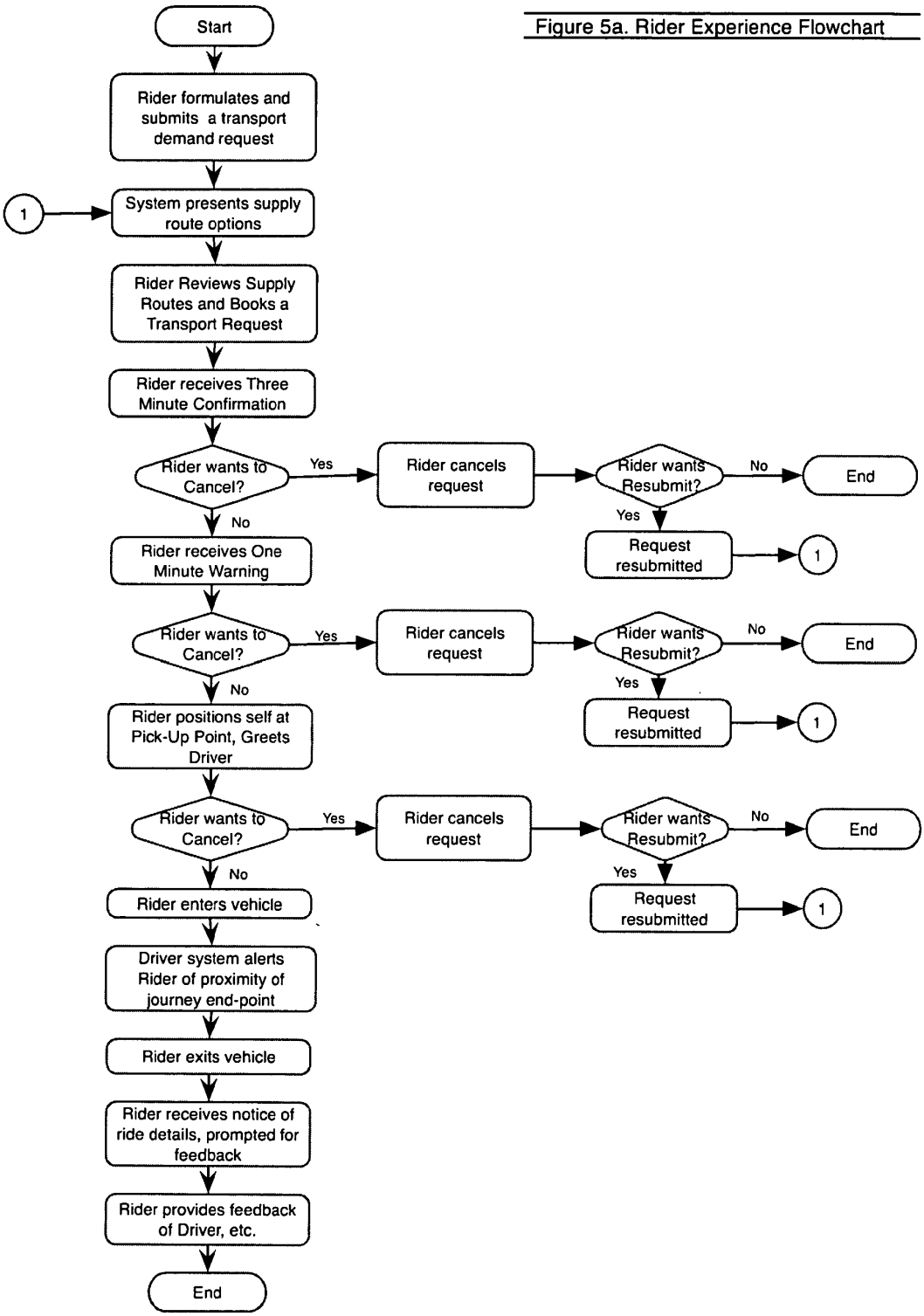


Figure 5b. Rider Experience, Functional Options Data and Action Details

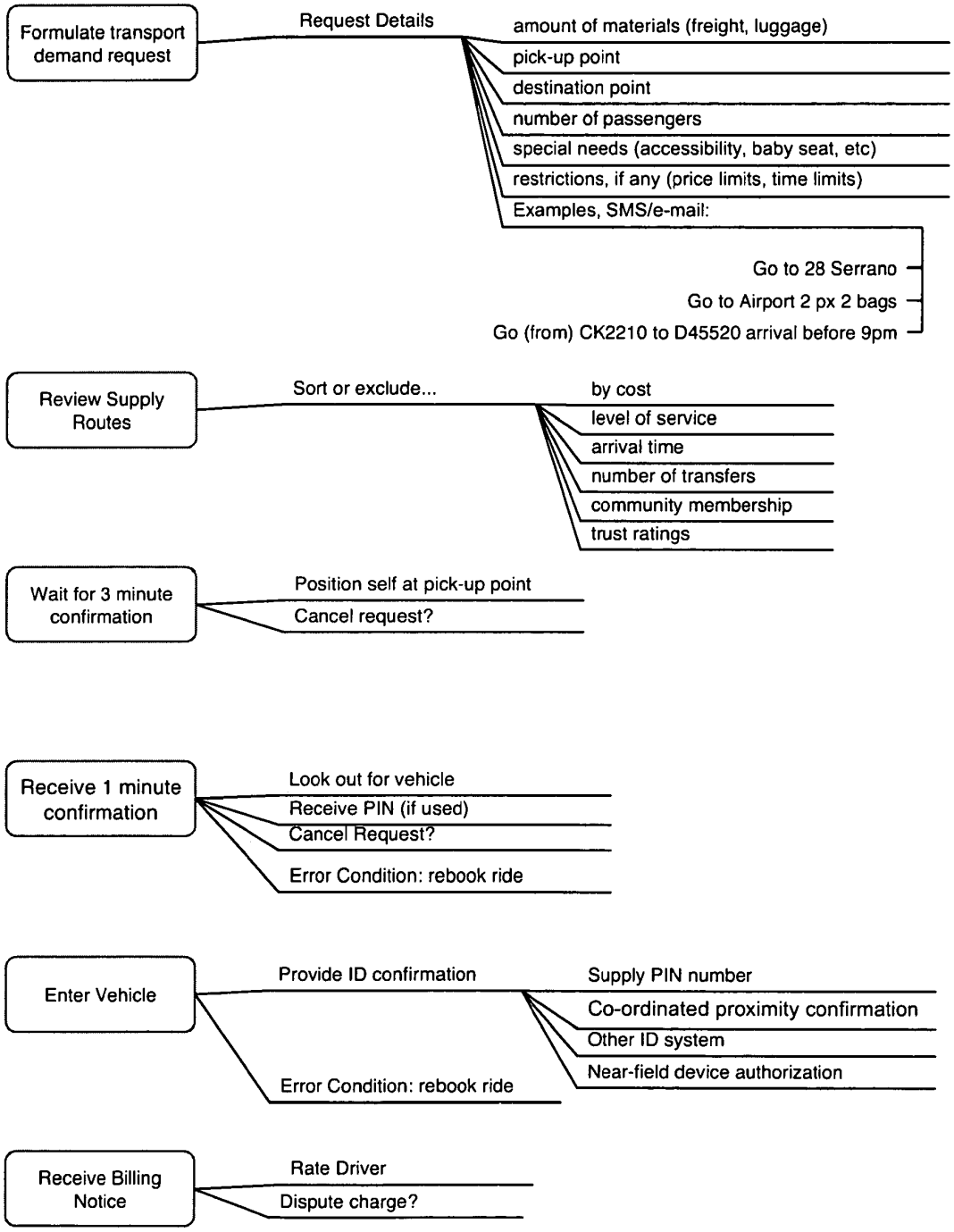


Figure 6a. Driver Experience Flowchart

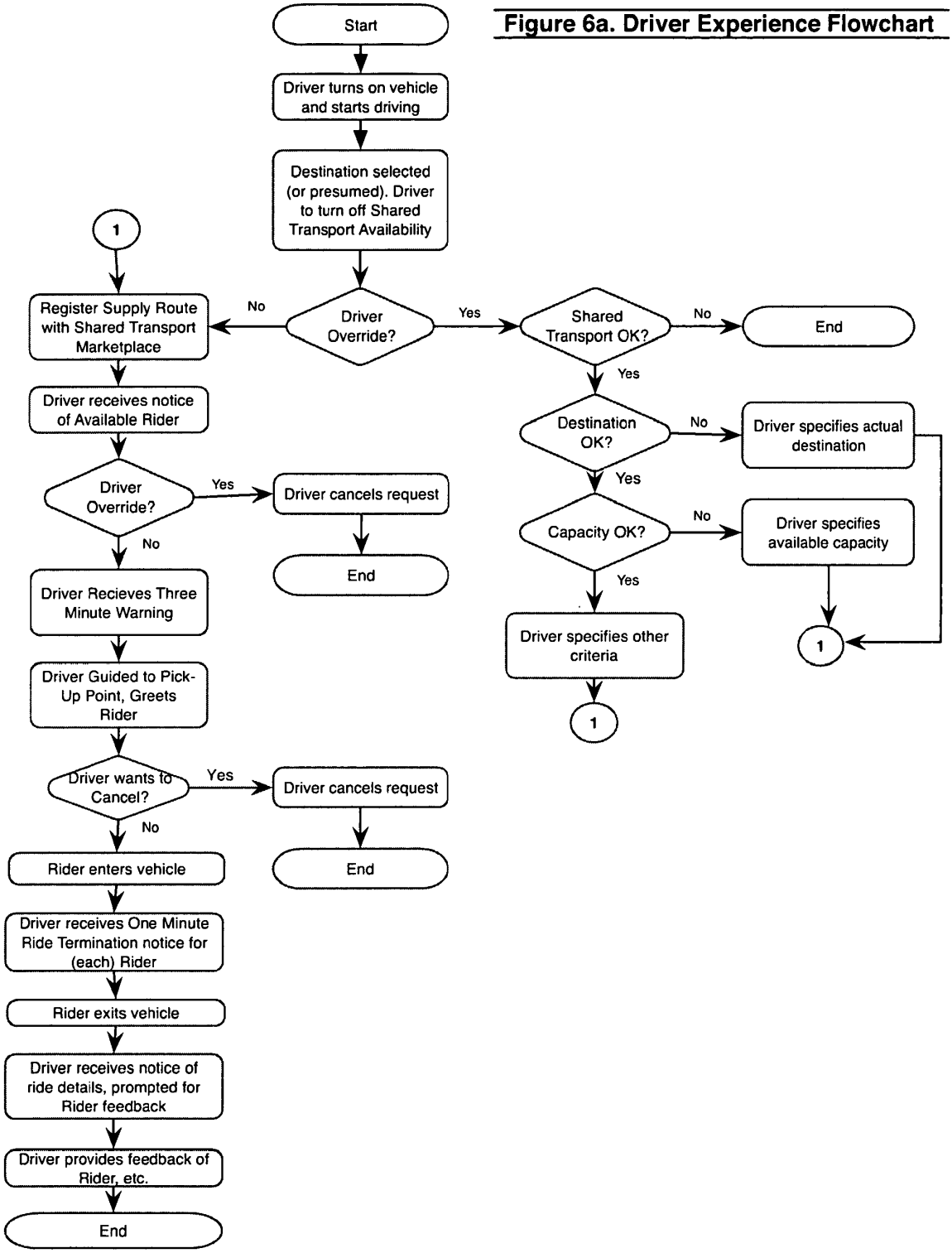
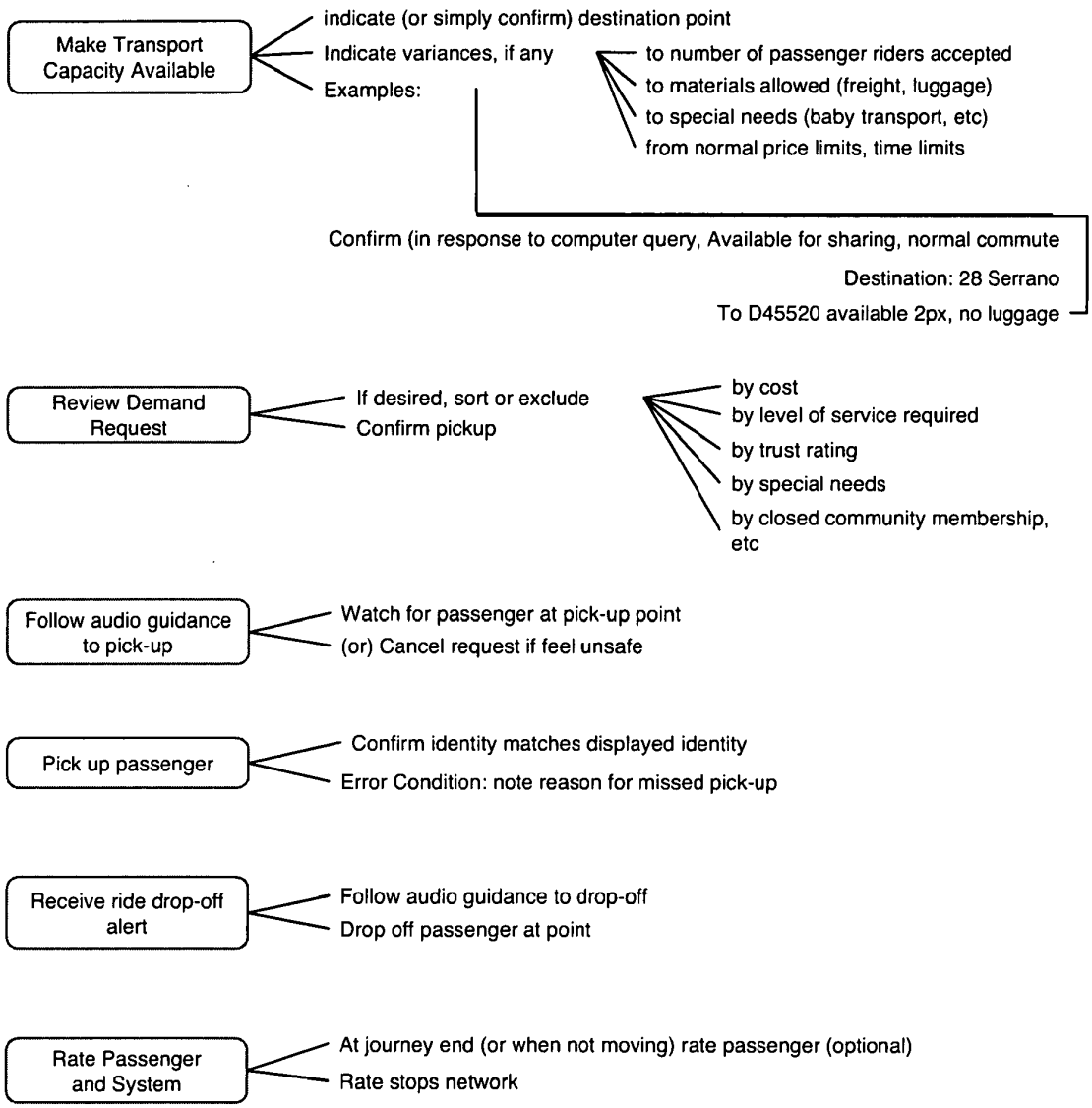
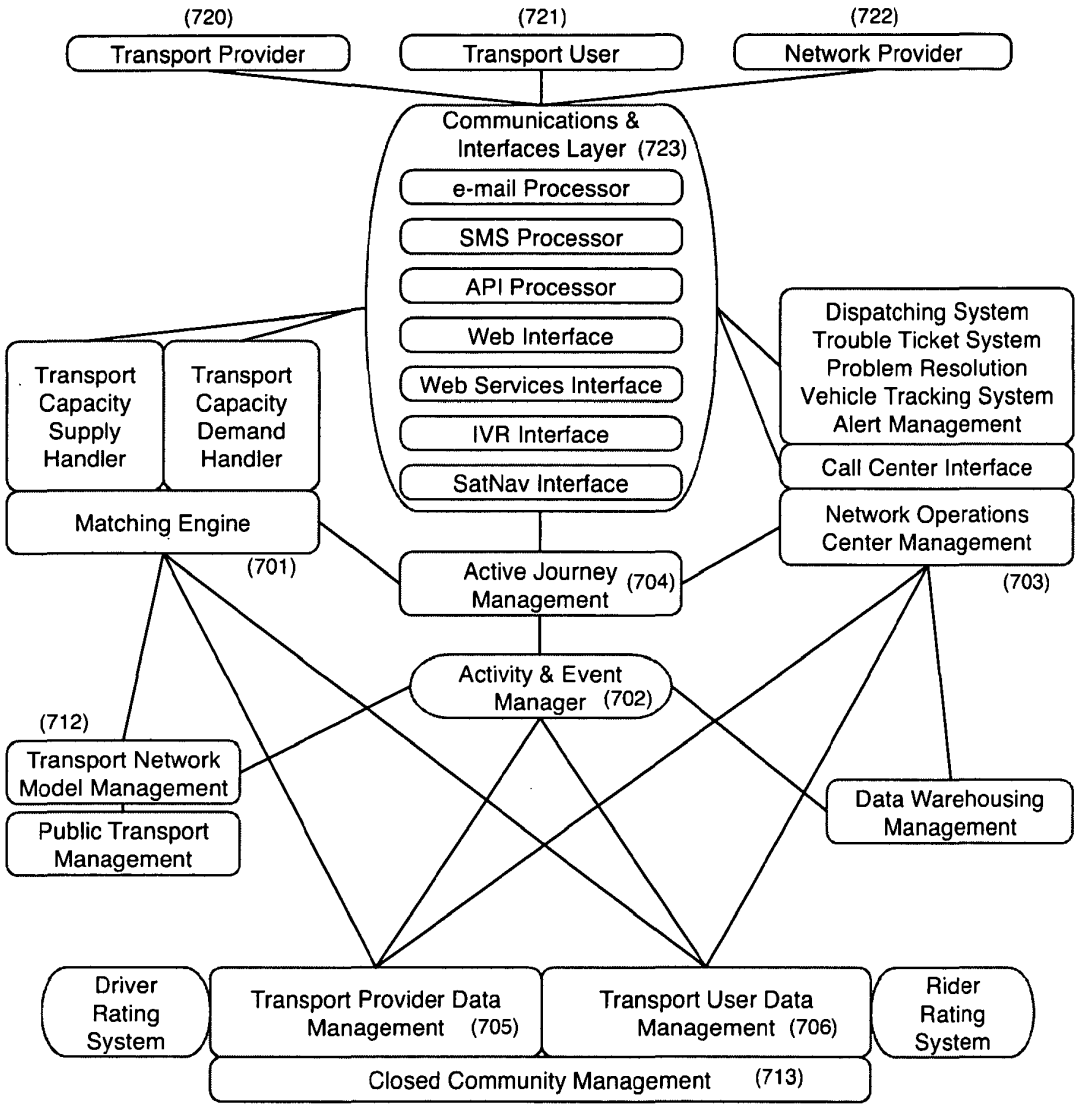


Figure 6b. Driver Experience - Functional Options





RIDER DB (707)	DRIVER DB (708)	NETWORK MODEL DB (710)	Activity & Event Manager
- Preferences	- Preferences	- Stops	Driver Event Handling
- Placenames	- Placenames	- Transit Times	Rider Event Handling
- Transactions	- Transactions	- Distances	Interface with Billing System
- Audit Trail	- Audit Trail	- Stochastic model info	External Ticketing Interfaces
- Activity	- Activity	- Visualization info	
- Ratings	- Ratings		Transport Management (711)
- Routes	- Routes	JOURNEYS DB (709)	Stochastic Analyzer
- Communities	- Communities	- Journey Activity	Geography Manager
			Public Transport Model
			Visualization Models

Fig 7. Shared Transport Marketplace Server & Subsystems

Fig 8a. Driver Journey, on Street Network

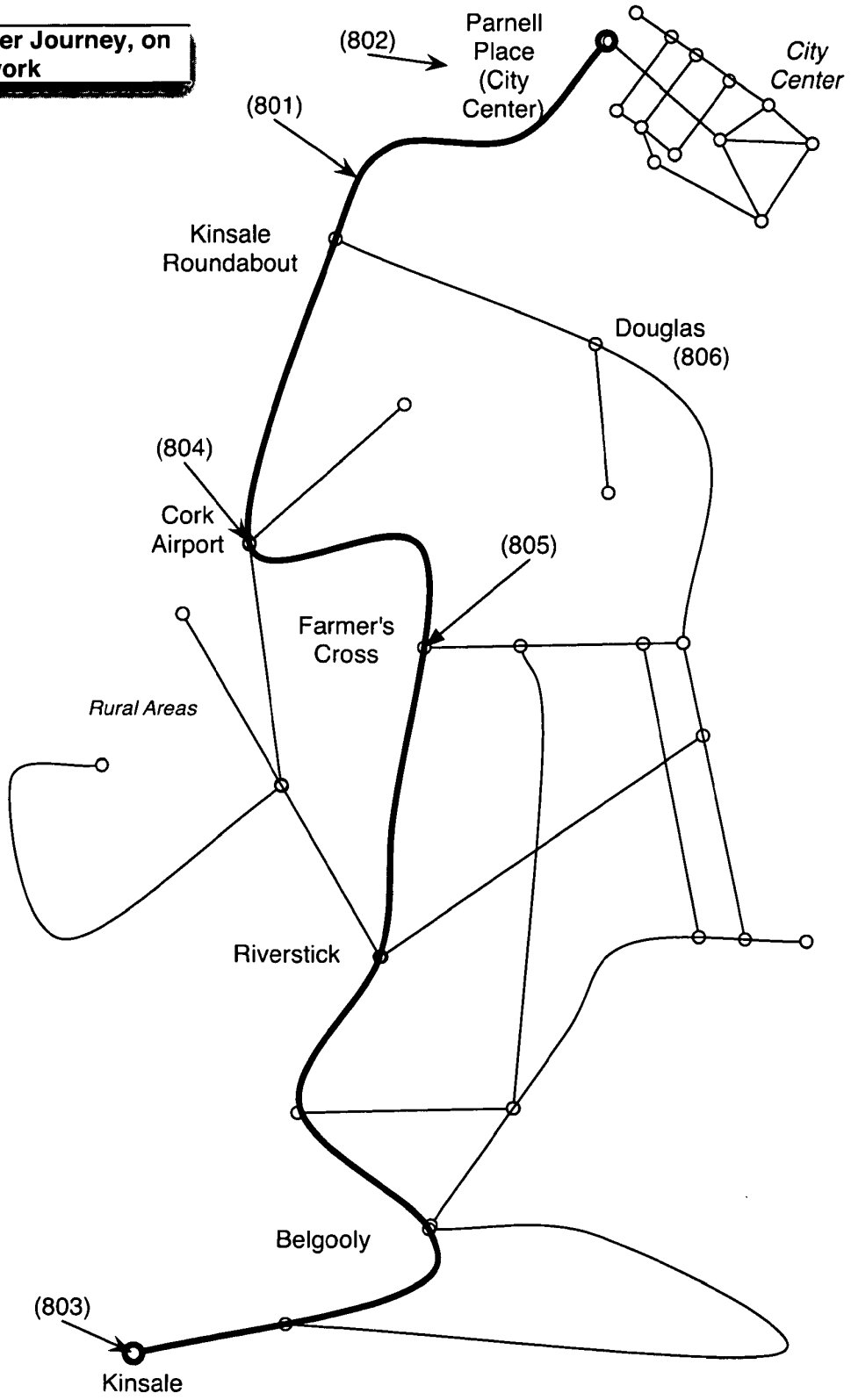


Fig 8b. Driver Journey Logical Characterization

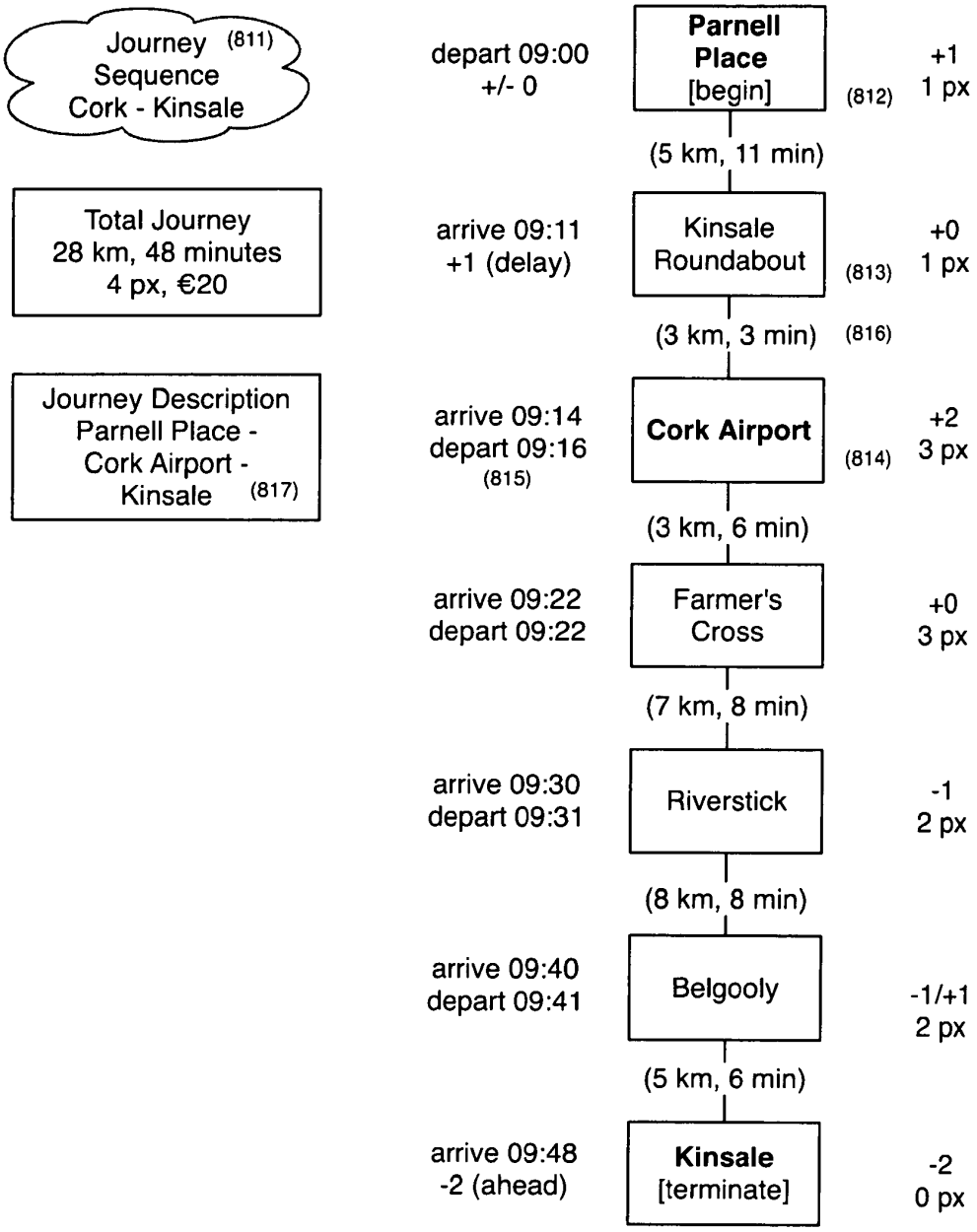


Fig 9a. Active Network, Geographical Representation

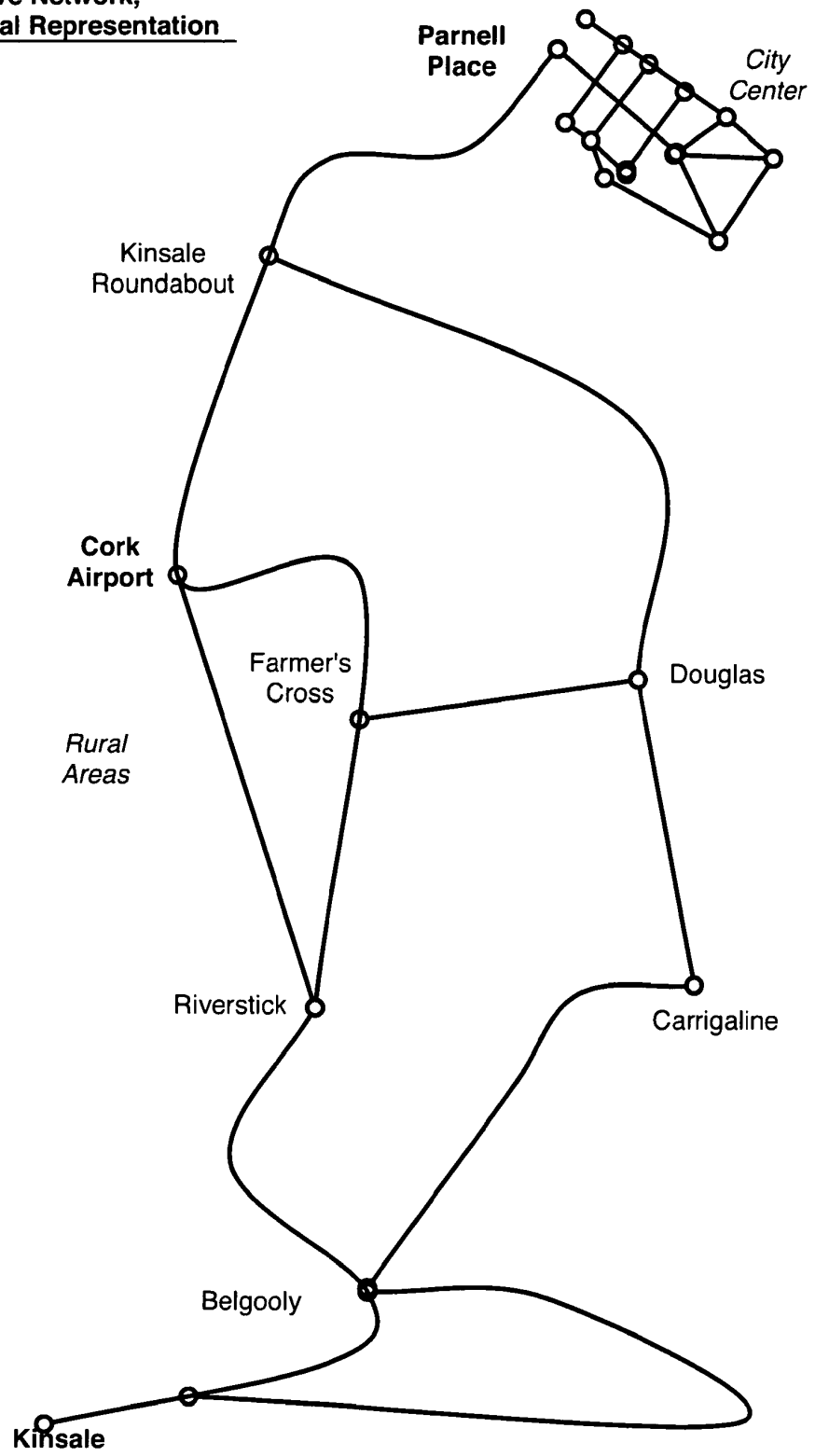


Figure 9b. Active Transport Network, Logical Presentation

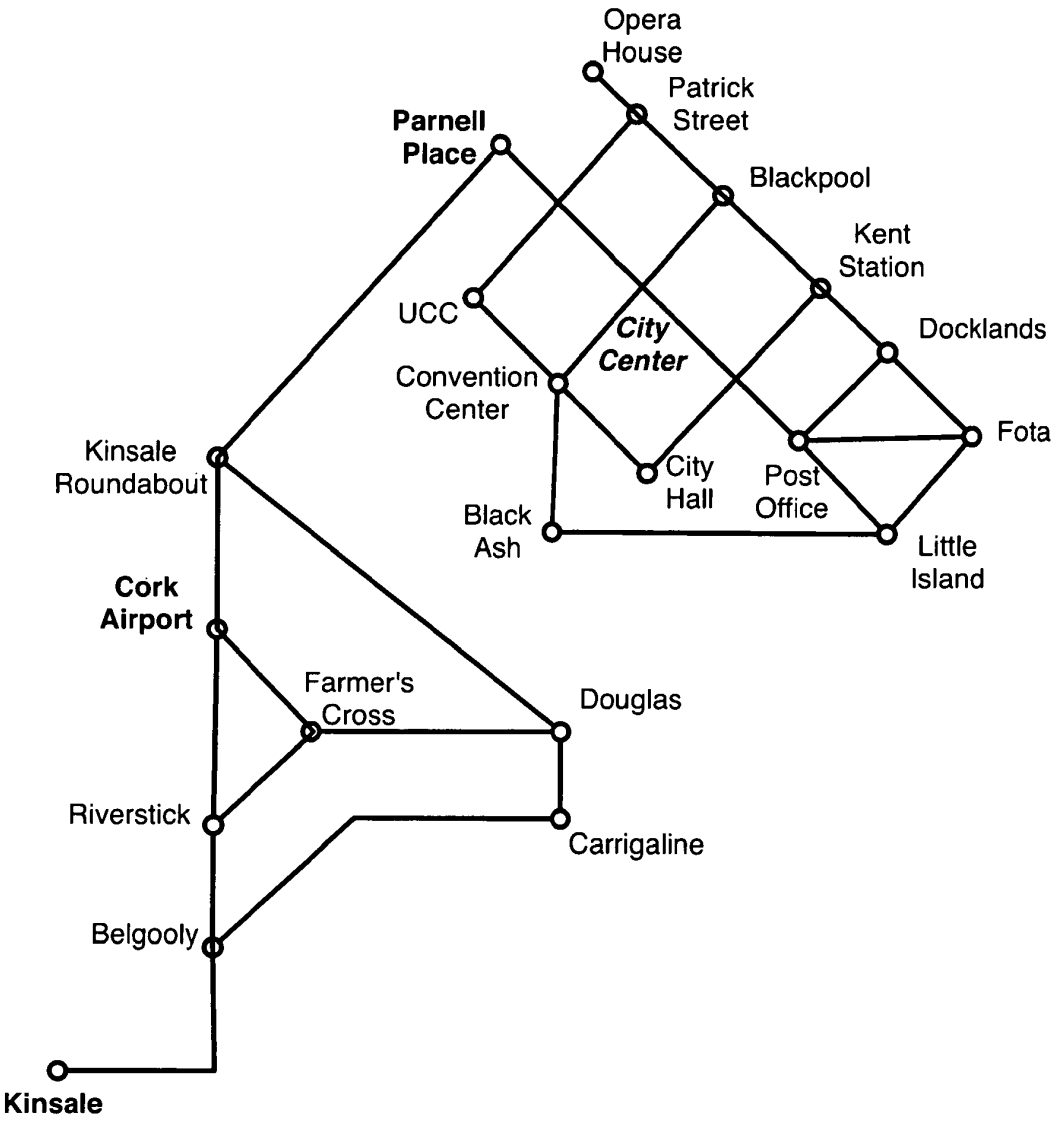
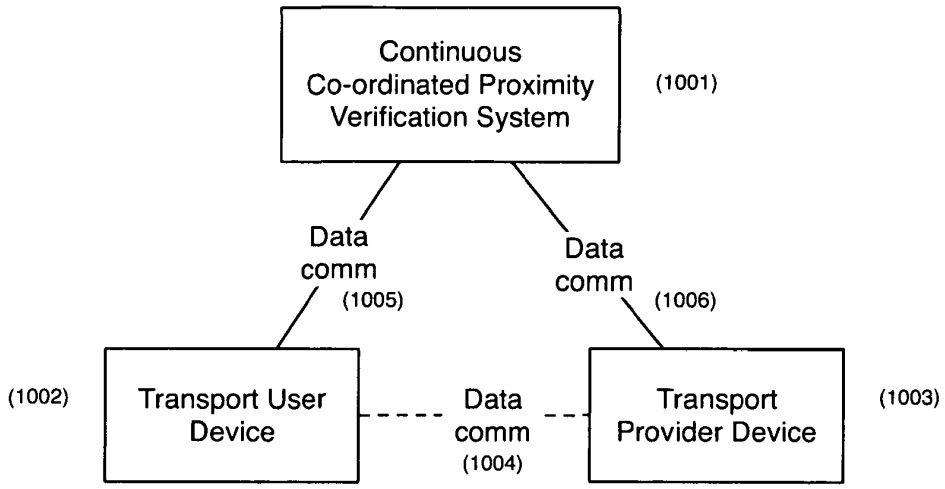


Figure 10a. Elements and communication channels for Continuous Co-ordinated Proximity by independent verification of position



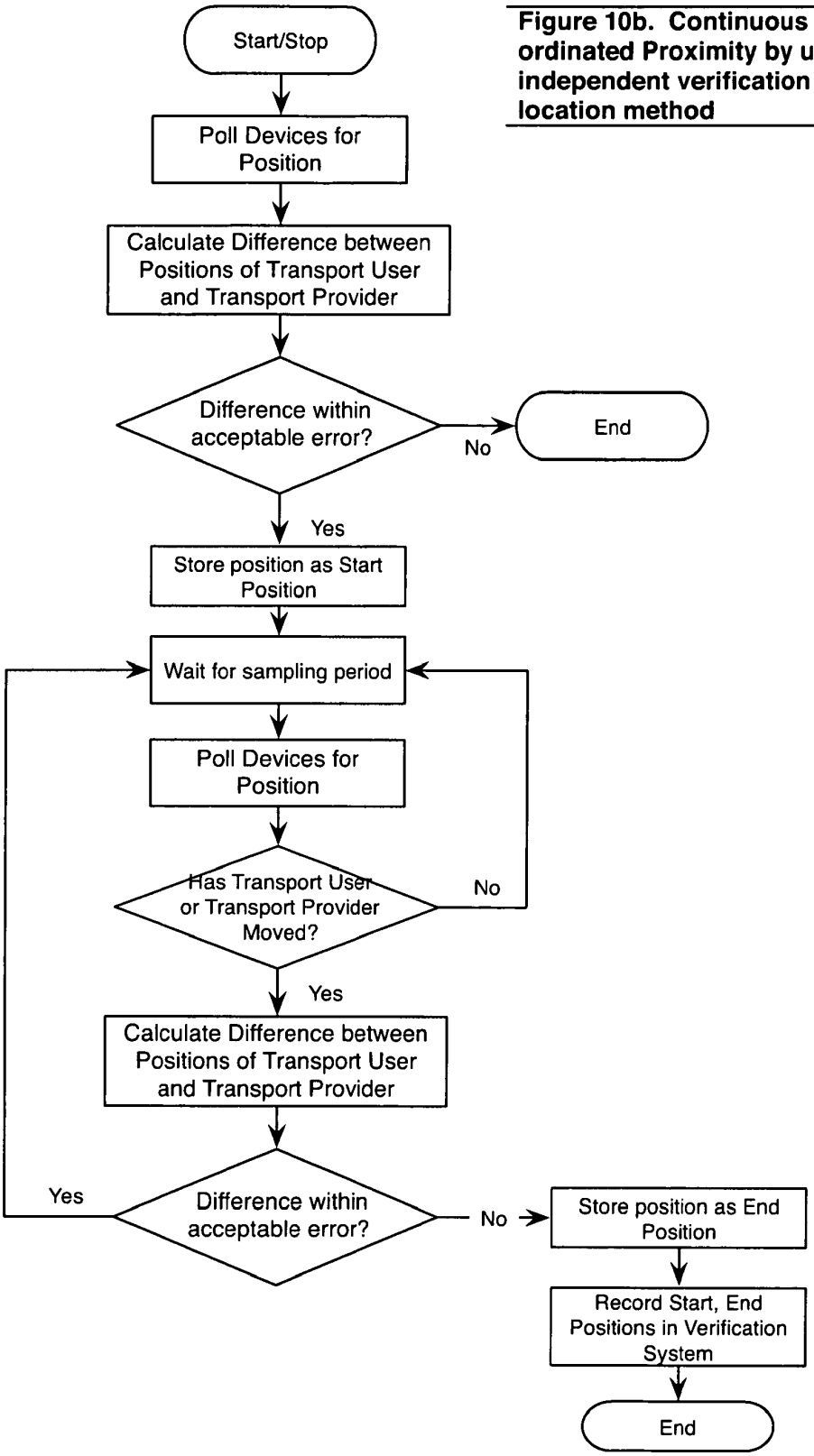
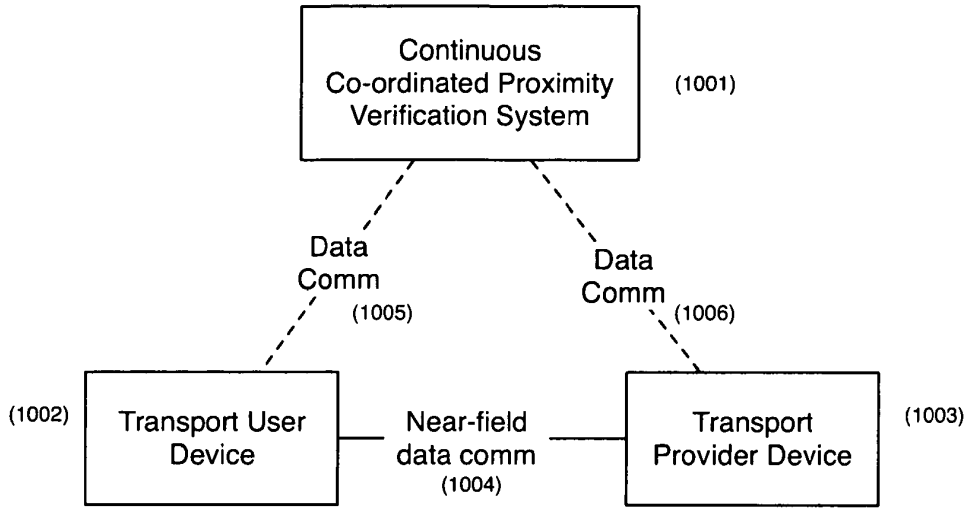


Figure 10b. Continuous Co-ordinated Proximity by using independent verification of location method

Figure 11a. Elements and data communications links in Continuous Co-ordinated Proximity by verification of near-field communications link method



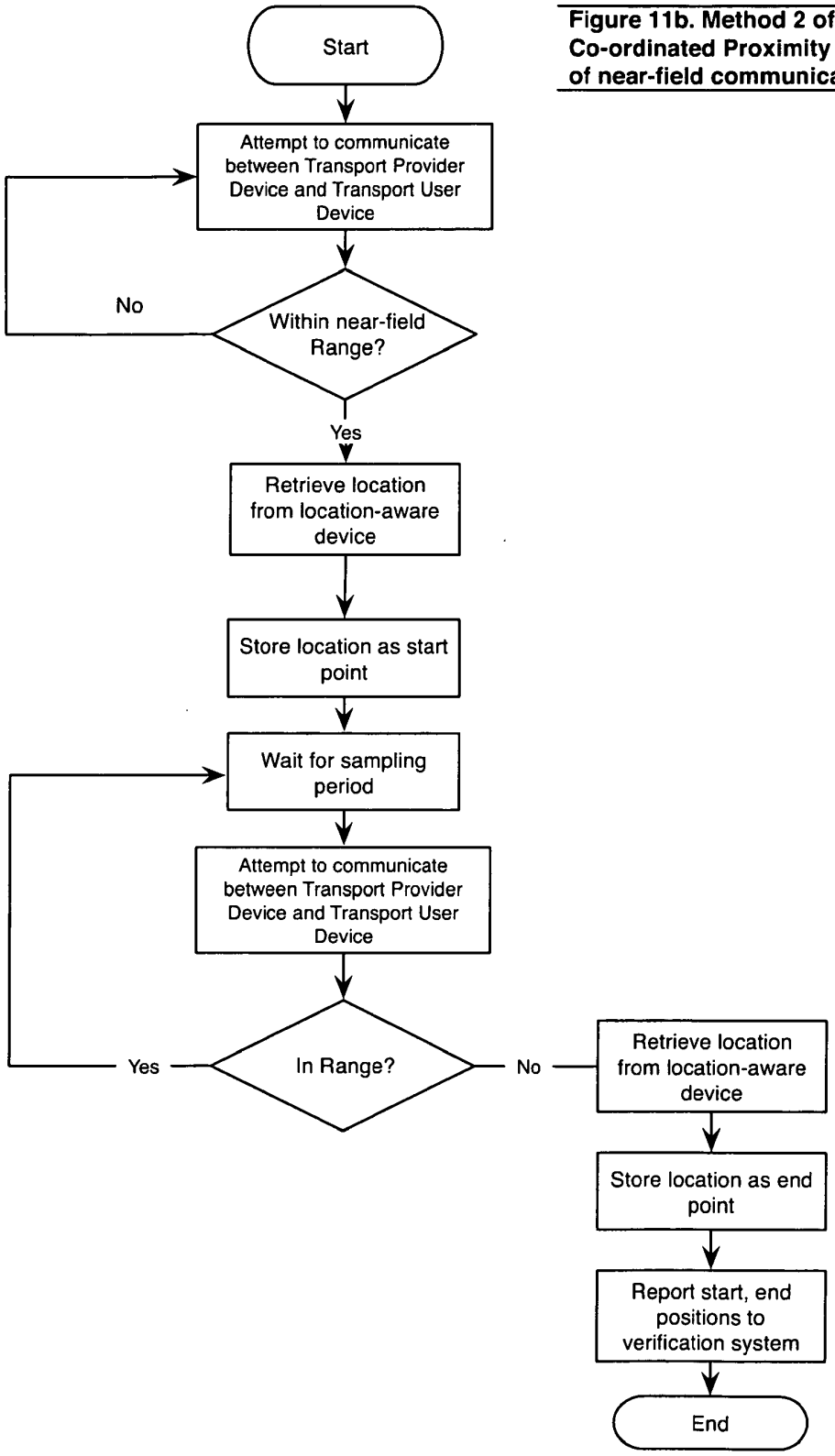


Figure 11b. Method 2 of Continuous Co-ordinated Proximity via verification of near-field communications link

Fig 12a. Access Control System

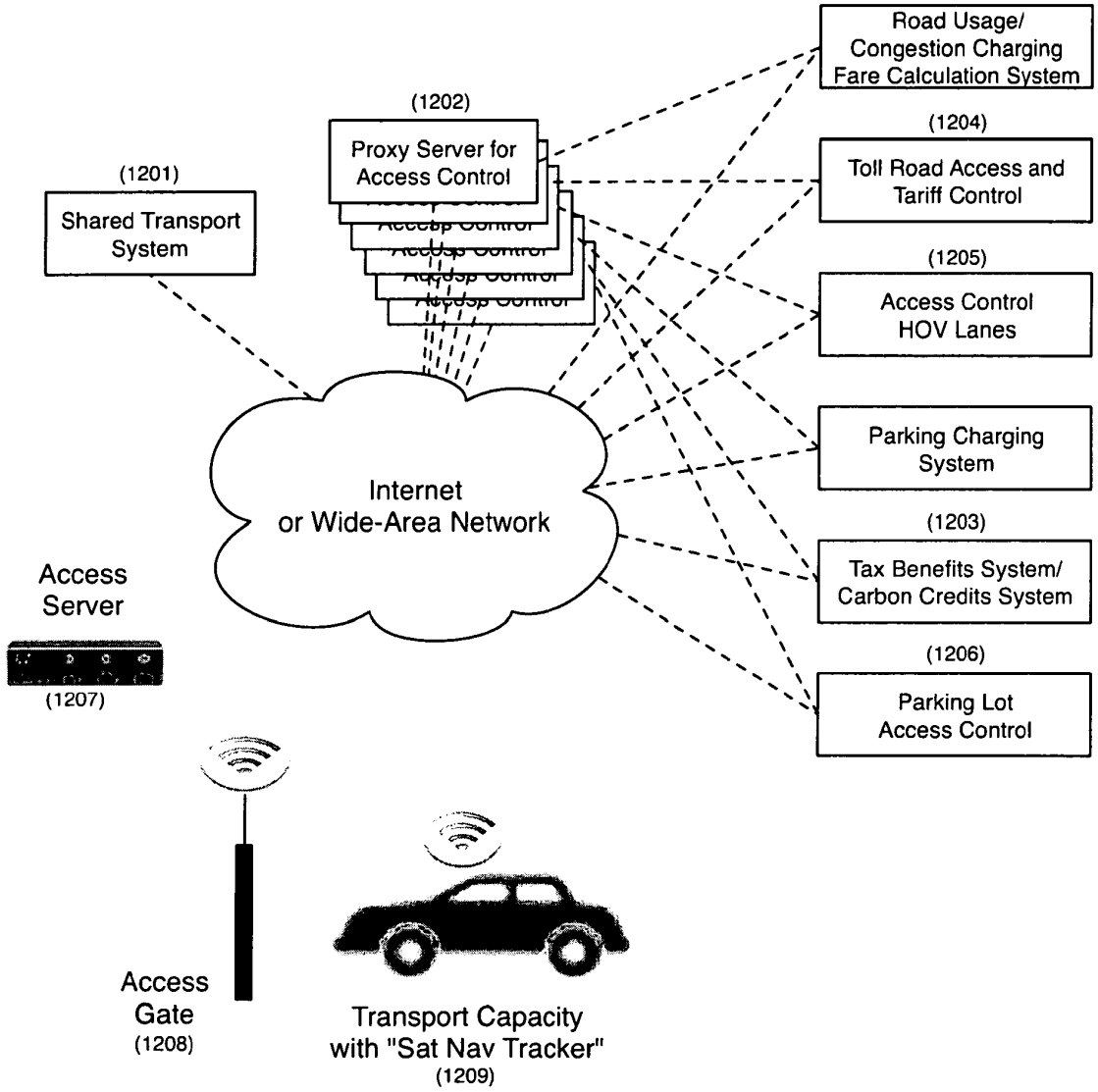


Fig 12b. Access Control System, Server Push Method, Server-side Logic

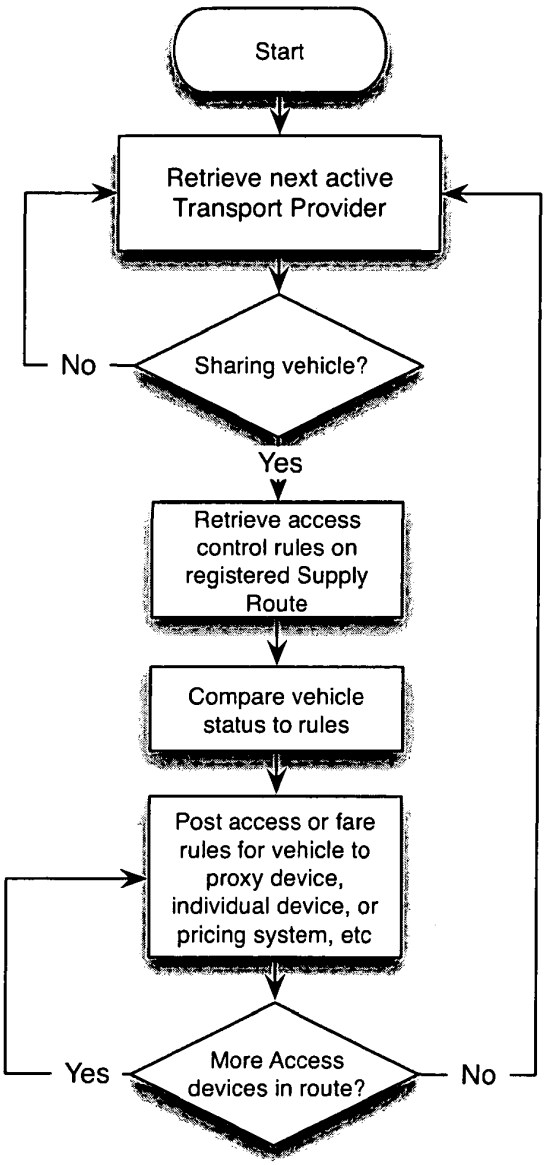


Fig 12c. Access Control System, Server Push Method, Client-side Logic

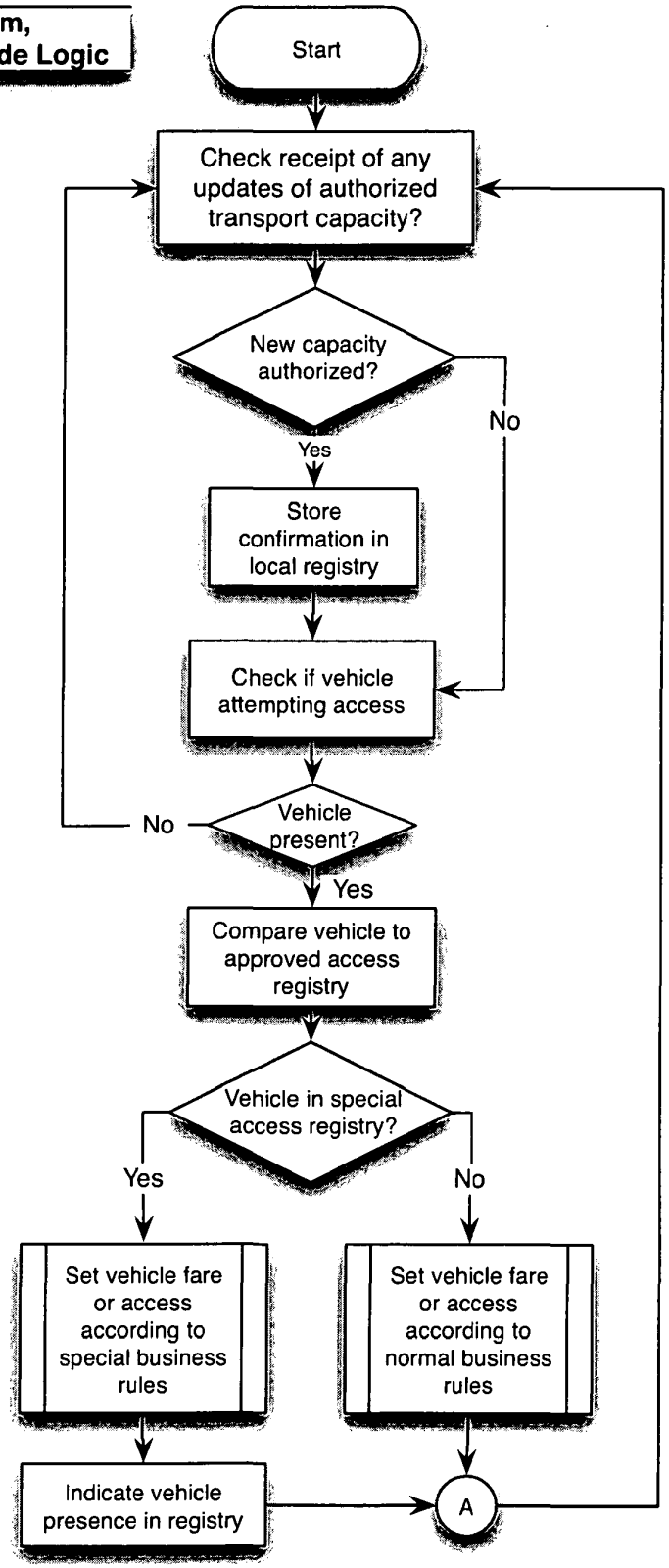


Fig 12d. Access Control System, Client Pull Method, Central Server-Side Logic

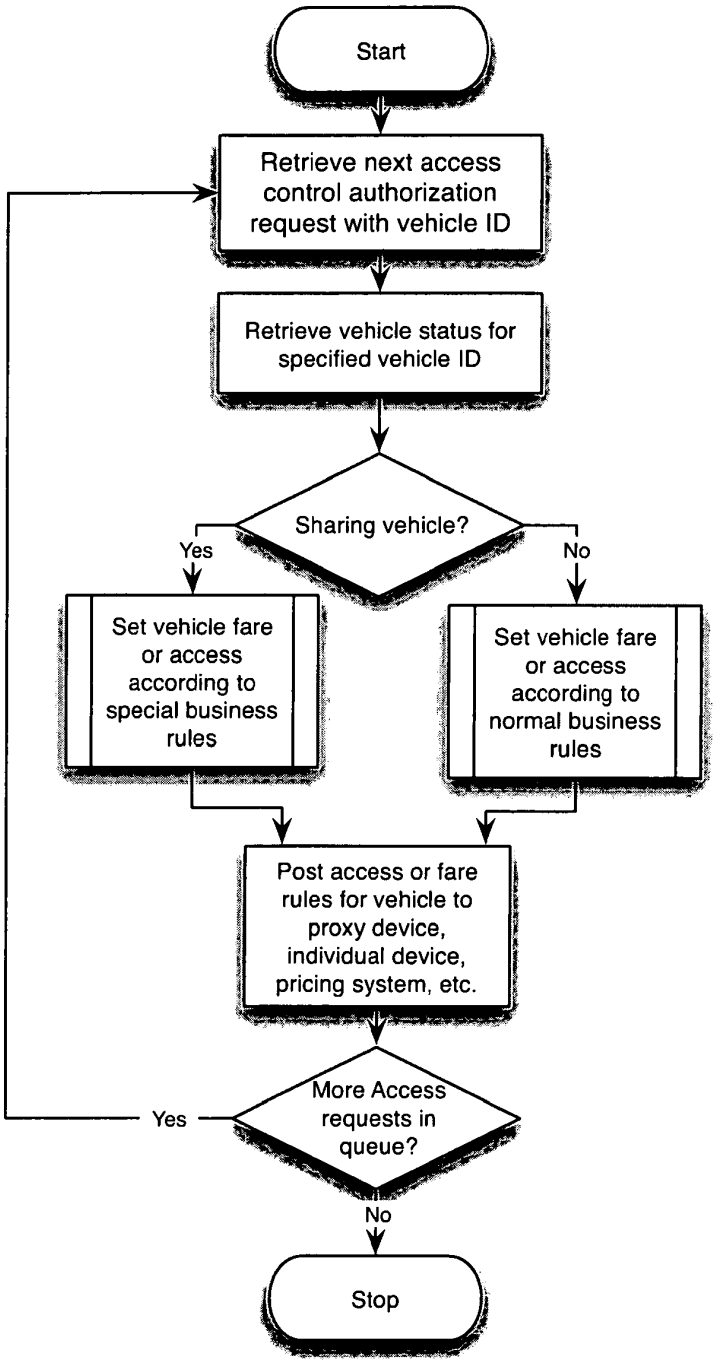


Fig 12e. Access Control System, Client Pull Method, Client-side Logic

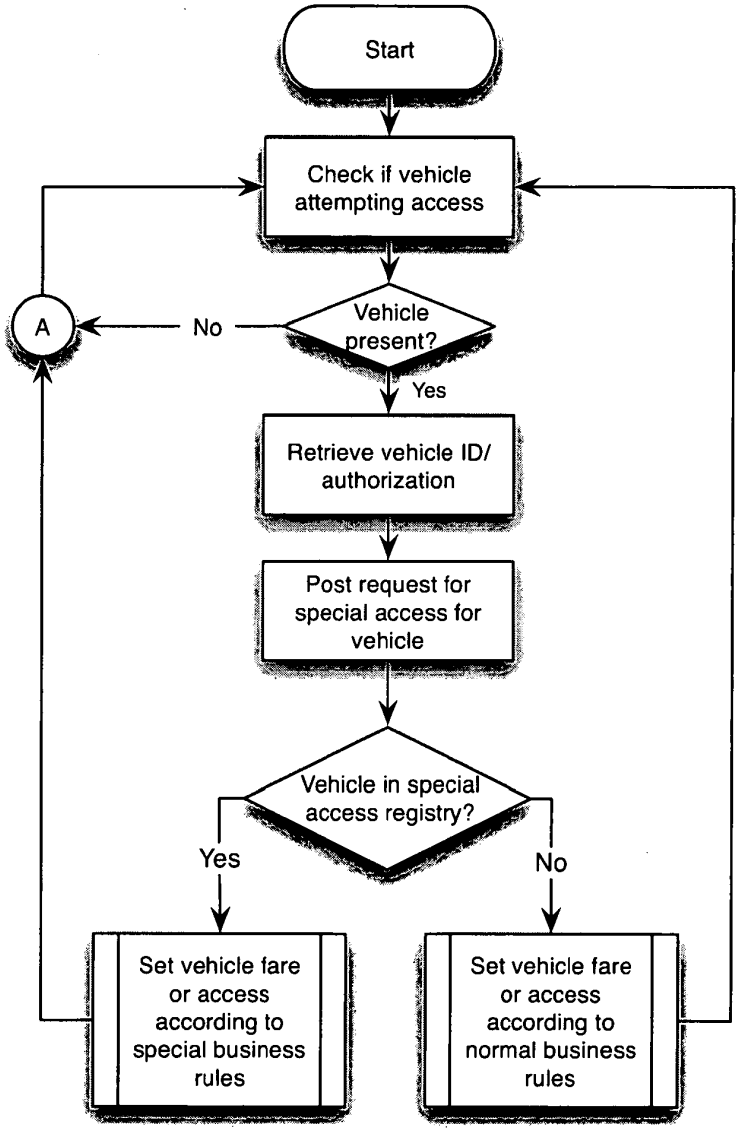


Fig 13. Transport Community Proxy Message Service

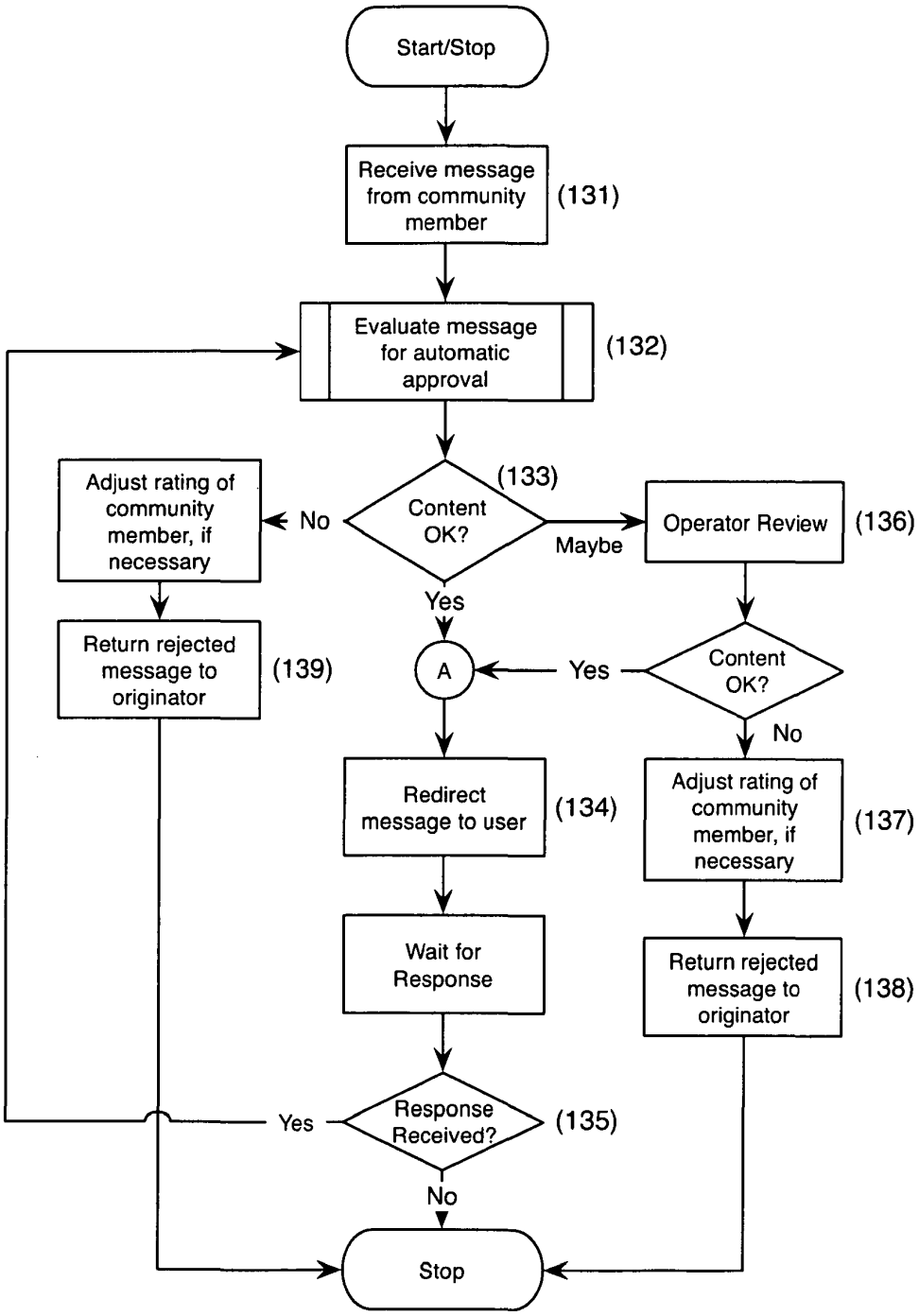


Figure 14a. Full Street, Active Capacity and Node Representation

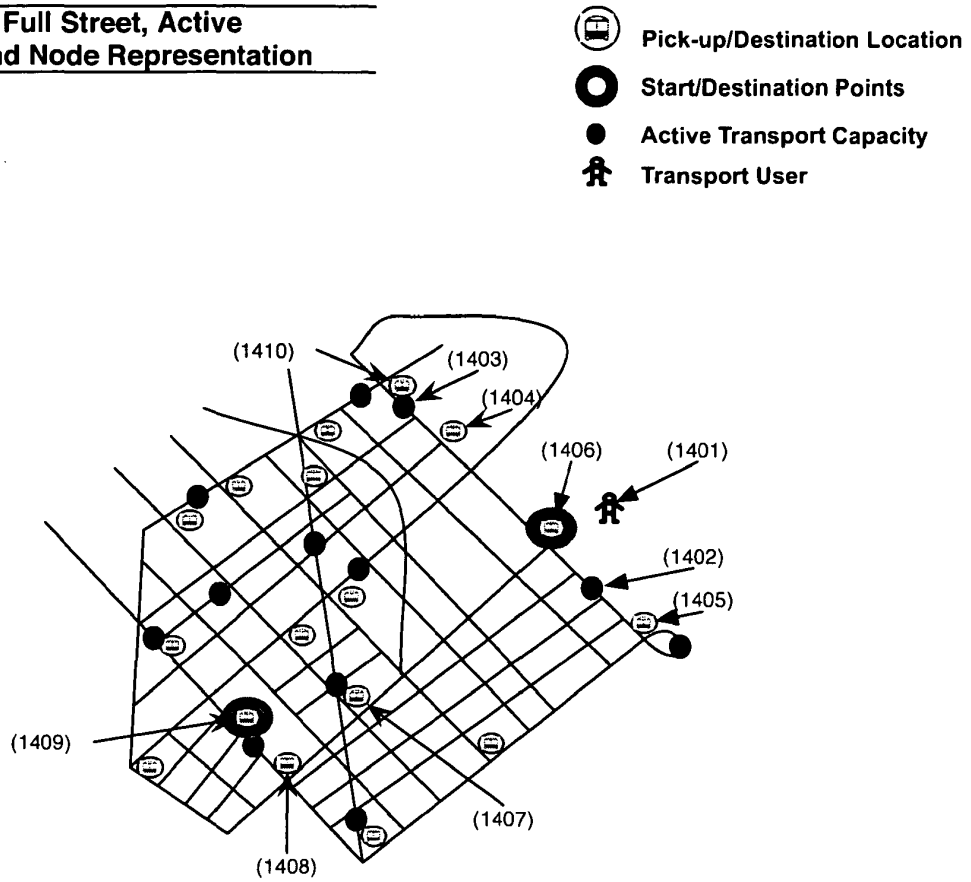


Figure 14b. Network, Active Street and Capacity Representation

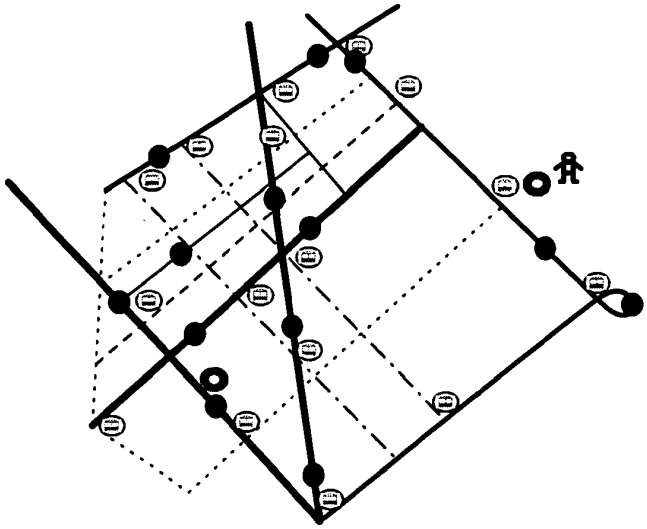


Figure 14c. Network, Active Zero Transfer Street and Capacity Representation from Specific Start Point

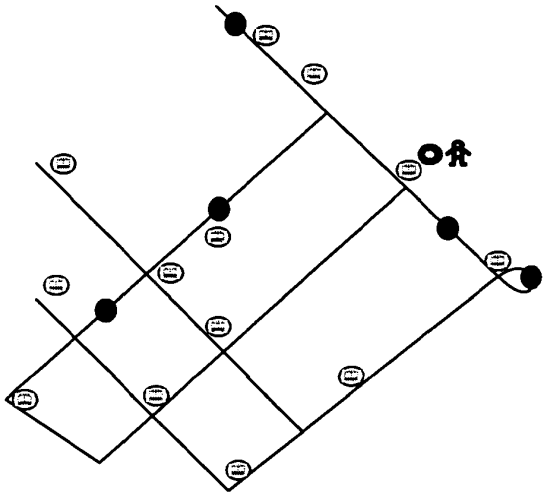


Figure 14d. Stochastic Network, Time of Day Capacity Representation

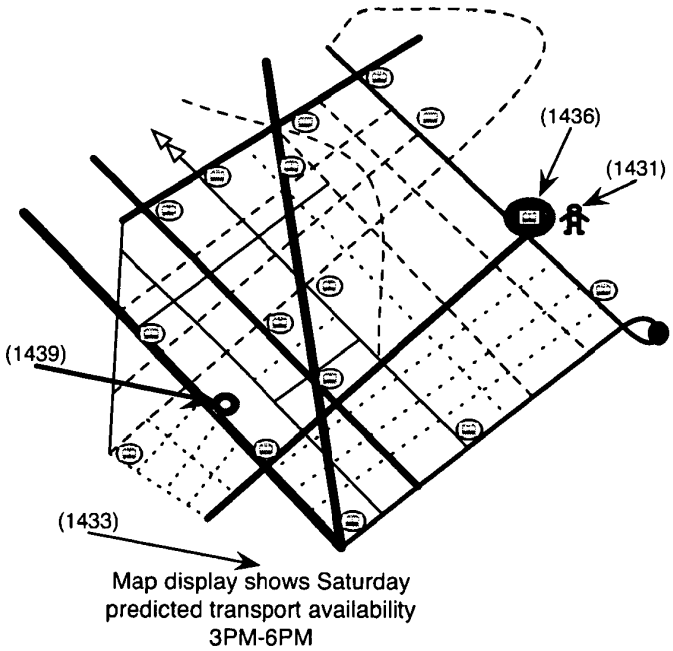


Figure 14e. Stochastic Network, Active Street and Capacity Representation, Specific Departure Point, Outbound

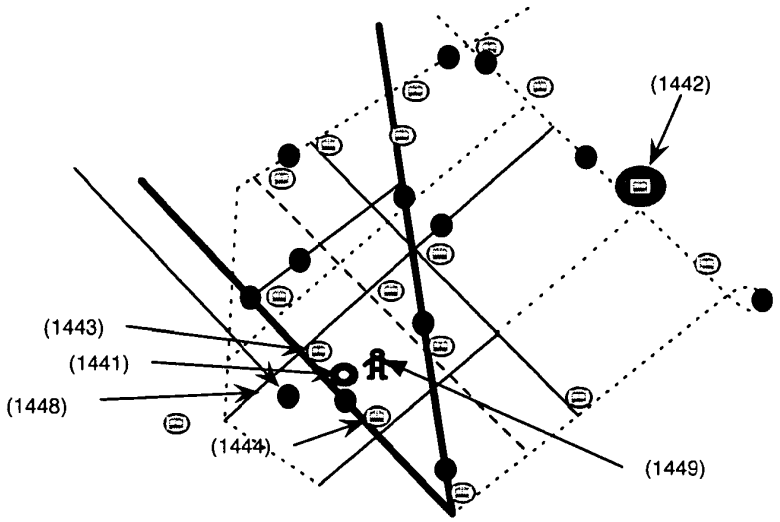


Figure 14f. Network, Wait time and Transfer Representation

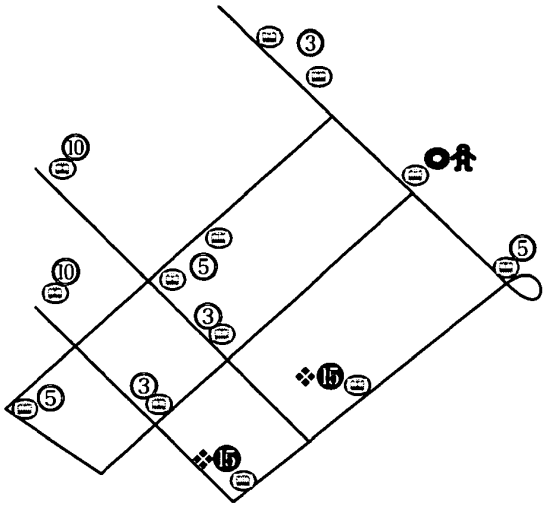


Figure 14g. Stochastic Network, Tabular Representation of Time of Day Capacity

(1471)

(1472)

(1475)

Start Point: 2142 14th Ave;
Destination: 200 Broadway, Troy

Time of Day	Departure Location	Availability
5:00am-6:30am	13th St	15 minutes
	15th St	no service
6:30am-7:30am	13th St	5 minutes
	15th St	10 minutes
7:30am-8:30am	13th St	3 minutes
	15th St	5 minutes
(1473) 8:30am-10:00am (1474)	13th St	5 minutes
	15th St	5 minutes
10:00am-4:30pm	13th St	10 minutes
	15th St	15 minutes
4:30pm-7:30pm	13th St	5 minutes
	15th St	5 minutes
7:30pm-10:30pm	13th St	5 minutes
	15th St	15 minutes
10:30pm-2:30am	13th St	15 minutes
	15th St	1 hour
2:30am-5:00am	13th St	no service
	15th St	no service

Figure 14h. Combination Real-time & Stochastic Network Departure Board for Shared Transport Network

Start Point: 2142 14th Ave (1481) (1485)

Destination (via points)	Departure Location	Departure (estimated)
Troy City Center	13th St	③ minutes
Rensselaer (State St, Watervliet)	15th St	⑤ minutes
Cohoes (Green Island, Watervliet)	13th St	(every ⑨ minutes)
Albany Street	13th St	(every ⑮ minutes)
Broadway	15th St	(every ⑧ minutes)

(1483) (1485) (1486) (1487) (1482) (1488)

Figure 14i. Real-time Journey Planner for Shared Transport Network, Fixed Start & Destination Points, Tabular Representation

Start Point: Essex Fells, NJ (1491)
Destination: 222 E 32nd St, New York (1492)
Departure Time: Now (9:22am), Distance: 22 miles

(1494) (1495) (1496) (1497)

Options (1493)	**Departure / Arrival**	**Departure (estimated)**	**Cost**	**Arrival Time**
Option 1: Shared Transport	**Roseland Ave / 3rd Av & 32nd**	**③ minutes**	**$7.80**	**10:15 am**
Option 2: Shared Transport + Path + Subway (1498)	**Bloomfield Ave / Park Ave & 34th**	**(every ⑤ minutes)**	**$6.50**	**10:38 am**
Option 3: Bus + Shared Transport	**Bloomfield Ave / 2nd Ave & 32nd**	**(every ① hour, next 9:35 am)**	**$6.20**	**10:45 am**

PTO/AIA/01 (06-12)
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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	POOLED POINT-TO-POINT RIDE HAILING IN SHARED TRANSPORT SYSTEM

As the below named inventor, I hereby declare that:

This declaration is directed to:

☐ The attached application, or

☒ United States application or PCT international application number 16/197,953 filed on 2018-11-21.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

LEGAL NAME OF INVENTOR

Inventor: Sean O'SULLIVAN Date (Optional) :

Signature: Sean O'Sullivan

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

SHARED TRANSPORT SYSTEM AND SERVICE NETWORK

This application claims priority of Provisional Patent Application 60/900,808 filed February 12, 2007 and is a division of Serial Number 12/069,656 filed February 12, 2008.

This invention relates to a ground transportation network. More particularly, this invention relates to a ground transportation network matching individuals with transport capacity on a supply and demand basis.

Transport capacity, for example cars, often travel long distances with minimal load (i.e., SUVs on daily commutes with only the driver occupying the vehicle). Such capacity is disused because of a number of reasons, including (a) an occasional need for greater capacity causes consumers to buy excess transportation capacity, (b) variations in schedule and destinations traveled create non-matched transportation needs compared with other household members, (c) lack of knowledge of trusted users who could conveniently use this excess capacity, and (d) difficulty in providing an economic benefit to incentivize the driver to share their excess capacity. Meanwhile, the driver of a vehicle often has no choice but to use a personal transport vehicle (despite the high costs involved) because of lack of accessibility, inconvenient scheduling, or multiple interchanges required if they were to rely on public transport systems.

Proposals have been made, for example, in US Patent 6,697,730, to use a central assigning system and communications devices adapted to be associated with vehicles for transmitting information from the vehicles to the central assigning system, and for receiving information from the central assigning system. In the 1990s, the US Department of Transportation designated this "Dynamic Ridesharing" area a specific

area of research interest, under the designation ATIS8 as part of the National ITS Architecture, and has proposed methods for transactions, interchange of billing data, and the like. Such systems, if implemented, would represent advances over methods in common practice, however, it is believed the invention described herein makes such systems more practical and useful because of the following significant innovations and claims: methods to reduce the workload/steps necessary on the driver and the rider to make this system more inconvenient; methods to improve the trustability of drivers and riders, increasing the likelihood people will use this system; a hardware device which would communicate visually to external riders; automatic determination and registration of transport capacity destination and capacity, increasing availability of shared transport vehicles; methods to characterize and publish information about "ad-hoc" transport capacity in manners similar to traditional, centrally controlled transit systems, in order to increase trust and ridership in the system; and an ad-hoc nature to the proposed system which enables casual use by registered users.

The inefficient use of transport capacity results in approximately 3-4 times as many cars on the road as would be necessary if capacity were only 50% occupied. This has the additional implications created by the excess consumption of fuel in potential environment problems (CO_2 pollution and global warming) as well as geopolitical problems (for example, many countries including the United States could be energy self-sufficient if they used their existing transportation capacity only 40% better (versus the 200+% better that could theoretically be achieved).

In cities such as Los Angeles, the transportation network is largely dysfunctional (i.e., the average worker spends 1.6 hours of their day in unproductive and costly

commuting via personal car on congested highways). Additionally, such a consumer cannot rely on public transit because mass transit "doesn't take them from where they live to where they work".

Inadequate "feeder systems" for the public transit network mean that billions of dollars are spent creating subway and rail systems that are massively underused, in terms of persons transported per hour versus the potential capacity of these rail systems. The flexibility of highway and road networks, along with the critical mass of car penetration and the marketplace dynamic of urban real estate value, however, means that wherever a highway is built, personal transport cars will soon fill it, creating further urban sprawl, with all the societal and ecological disadvantages that implies.

Personal transport cars are common, among other reasons, because (a) the lack of availability of mass transit networks to serve the home or destination of the driver, (b) the inconvenience of waiting a long or unknown period of time for public transit, (c) fear of traveling with strangers or fear in waiting for long periods at public transit points.

Many large cities have successfully implemented mass transit systems which are widely used by people from a wide variety of socio-economic backgrounds (i.e., London, New York, Madrid, Tokyo). While even these systems can be improved, these examples show that if a Shared Transport system exists with sufficient timeliness and advantages, it will be widely used. These cities provide transit systems because these systems reduce their cost for infrastructure (i.e., building ever-larger and more inefficient highways) and increases productivity for their citizens and the companies in their region.

So, cities have long sought to provide mass transit systems which take people from where they live to where they work and/or where they shop. However, since the popularization of highways in the 1950s in the US, cities have become increasingly suburban. Highway systems do not complement mass transit systems and, in fact, work against mass transit systems by enabling urban sprawl to the point where mass transit infrastructure is unsustainable (at the extremities of a city center, due to lack of population density) and unattractive (because of inconvenient intermodal interchange). As fewer people use mass transit, less routes are supportable, less area is reachable via mass transit, and thus more people need to rely on relatively costly and ecologically damaging individual transport, resulting in the mass transit system itself imploding with a lack of critical mass, while personal transport systems simultaneously suffer through massive over-congestion.

It is an object of the invention to provide a system that enables regular highway traffic and privately owned personal transport systems to augment and enable public mass transit networks.

It is another object of the invention to match a need to move individuals and/or goods from one geographic point to another geographic point ("Transport Demand") with an unrelated driver's unused transportation capacity.

It is another object of the invention to provide riders and transport providers with information services and content that adequately enable the use and expansion of such a system.

Briefly, the invention provides a network system that matches the supply and demand of transportation services by incorporating unused transportation capacity (i.e.,

empty seats) with a real-time allocation and matching service that enables individuals and goods to conveniently hire that capacity with attractive pricing, rapid responsiveness, better information availability and trusted security.

The network system incorporates telecommunications and computing technology to match the supply of excess transport capacity with the demand for personal transport. In areas where a critical mass of transport providers can be established, this system aims to provide pick-up and drop-off service to within a few hundred yards to the majority of locations in the covered area, with response/waiting times of 3-15 minutes under optimal circumstances. In addition, different levels of service can be provided, including the provision of transport for goods, persons with special needs, and persons or goods within closed communities of transit providers.

The network system ("Shared Transport System") demonstrates how interconnecting personal communication devices and computer networks with personal and corporate Shared Transport vehicles can (1) provide revenue streams to drivers who share their vehicle, (2) provide security through the provision of track-ability and identification of both drivers and Riders, (3) provide "feeder systems" for public transit networks, (4) provide trusted networks of pre-approved providers to accommodate scheduled services for special needs cases, such as children or physically disabled persons, and (5) provide a variety of service levels for those who need more than just commuter style transport.

It is believed that an efficient use of the network system would mean that a significant fraction of those households with two or more cars would no longer require the additional car, and that a smaller portion of a national economy will be devoted to

widening and expanding a country's highway networks and importation of energy sources such as oil.

The below "Shared Transport System" accomplishes this aim by enabling private transport vehicles to serve as an extension of the mass transit system. Where no mass transit is available, or is inefficient, private transport vehicles can act as a public transport mechanism. Where mass transit is available and cost effective and timely, private transport vehicles act as a feeder network to the public transit system.

In situations such as a daily commute, predictable trends will flow from the data generated by this shared ride system, and will enable rapid and flexible route allocation that will enable public or private mass transit providers the capability to offer new transit services, such as bus routes, that are determined via stochastic measurement. A rapidly responsive and timely public transit network will result in increasing numbers of public transit riders and recreate the market parameters that are needed for mass transit systems to gain critical mass in ever changing and expanding markets.

Whereas, many systems exist for measurement of traffic over specific sections of road network (loop detection systems, video camera monitoring systems), the bulk of these systems are infrastructure dependent and typically measure the transport throughput of a given road segment, without capability to evaluate the total journey of the vehicle. It is well known, as well, that GPS systems could be used for the generation of road usage charging systems that are anticipated to come into use in the next several years. There are also systems in use, or proposed, that allow traffic speeds to be measured (and displayed on interactive maps) by the collection of data about the speed of a vehicle ("probe vehicles") to characterize the speed of segments in a traffic

network. However, the advantage of the present system is that it uses the speed, journey start and end points, intermediate destinations, spare vehicle capacity, and vehicle type characteristics of registered transport capacity to automatically generate specific information about journey capabilities between any point in the covered road network. The availability of this information is believed to be critical to the success of user acceptance of this method of transport.

A current drawback to carpooling systems, that of lack of information about the availability of services and timing between locations, can be overcome through the display of the available transport capacity.

Current mass transport systems, typically run by governmental organizations, provide schematic diagrams of the locations served by these networks, and timetables of operations. These schematic diagrams give confidence to the transport user that there is a steady flow of available capacity that they can rely upon. With this confidence, the transport user can elect to rely on public transport rather than purchase a car or second car for their household. However, carpool systems have had no equivalent, because these carpools are traditionally organized between a small group of tightly associated individuals.

The present system generates schematic and geographic maps indicating coverage areas, and is also capable of indicating typical availability and travel times at a variety of times throughout the day or week, based off a model of historic usage and travel times ("stochastic model").

Another drawback to current carpooling systems, due primarily to the difficulty of co-ordination and lack of computing and communications capabilities, is that they

assume the transport user must go to the same destination, or along the route of the transport provider. This is often suboptimal, as transport is often a "last mile" problem, and if one transport provider moved the transport user to another location where they could get directly home (using either public transport or the present system), the use of transport capacity could be made much more efficient, and vastly extend the possible reach and combinations of destinations. The present system, because of its ad-hoc nature and computational network model, can provide these transfer instructions to the transport user, and, importantly, providing graphical presentation of the reach of the transport network, giving confidence to the user that they won't be stranded.

Above was mentioned the issue of fear of traveling with strangers in public transit systems. The below system incorporates a security verifying and rating system to provide that the strangers in Shared Transport systems are trustworthy. For example, (a) bad drivers (those with excess points or driving convictions) are not allowed to participate in the system, (b) drivers with continually risky behavior are identified through a real-time rating mechanism available to riders and the in-car computer measurement system, (c) drivers who do not pick up riders are rated for their proclivity for failing to do so, (d) riders are rated for unusual behavior through a rating mechanism available to drivers, and (e) riders who refuse rides or miss rides are rated for their proclivity for doing so.

Alongside the issue of trustable strangers is the issue of anonymity. Riders or drivers may be concerned about their safety if a stranger knows how to contact them via their phone. Thus, the below system incorporates a mechanism allowing riders and drivers to contact each other through their phones without knowing the other's phone

number or full name, yet still allowing, for example, a driver to message a rider that a hat was left in the vehicle.

These and other objects and advantages of the invention will become more apparent from the following detailed description taken in conjunction with the accompanying drawings wherein:

Fig. 1 schematically illustrates a network system in accordance with the invention;

Fig. 2 provides a table of the transport capacity computing and communications components of the network system in accordance with the invention;

Fig. 3 provides a table of the rider technology components and rider demand request details of the network system in accordance with the invention;

Fig. 4 graphically illustrates the marketplace actors, their modes of access, information options and specification for operations of the network system in accordance with the invention;

Fig. 5a graphically represents the steps of the rider in using the network system in accordance with the invention (Rider Experience);

Fig. 5b provides a table of some functional options of information specification and actions of the rider in accordance with the Rider Experience;

Fig. 6a graphically represents a flow chart of the experience of a driver (Driver Experience) in accordance with the invention:

Fig. 6b presents a table of some functional options within the driver experience and subsystems in using the network system in accordance with the Driver Experience;

Fig. 7 graphically illustrates various components, subsystems and databases required for an optimal implementation of the invention;

Fig. 8a graphically represents the geographic track of a driver on their journey between a journey start point and the journey destination, shown as a dark solid line from Parnell Place to Kinsale;

Fig. 8b logically represents the driver's journey of Fig 8a with certain intermediate destination points of the driver's journey summarized, along with activity at each point and the variation of timing as expected by the shared transport active management system for that time of day on that route;

Fig. 9a shows a representation of the shared transport network at a moment in time, where active capacity is available (or expected to be available);

Fig. 9b shows a logical representation of the shared transport network displaying each stop using compact orthogonal and diagonal lines rather than geographic lines to emphasize the city center network's interconnections, to minimize distances in the rural areas and to present the network in a more readable format;

Fig 10a shows elements and data communication channels used to determine continuous co-ordinated proximity using a method where it is desired to have independent confirmation of the positional location;

Fig 10b represents the logic between elements of Fig 10 to determine and report on when and where the elements are in continuous co-ordinated proximity;

Fig 11a shows elements and data communications channels used to determine continuous co-ordinated promixity using a method where it is desired to use near-field communications as means for verifiable proximity;

Fig 11b represents the logic between elements of Fig 11a to determine and report on when and where the elements are in continuous co-ordinated proximity;

Fig 12a graphically illustrates elements of an Access Control System that would allow restricted or favorably charged access to road or parking resources depending on acceptable business rules for each type of use in accordance with the invention;

Fig 12b shows the server-side logic of the Access Control System where this authentication is, in the preferred implementation, pushed to the local device (where such information needs to be processed in real-time);

Fig 12c shows the client-side logic of the Access Control System where this authentication is, in the preferred implementation, pushed to the local device (where such information needs to be processed in real-time);

Fig 12d shows the central server-side logic of the Access Control System where this authentication is pulled from the server or cached servers (may be more appropriate in certain applications or for after-the-fact tariffs, etc);

Fig 12e shows the client-side logic of the Access Control System where this authentication is pulled from the server or cached servers (may be more appropriate in certain applications or for after-the-fact tariffs);

Fig 13 shows the logic of a communication system which proxies messages between a transport user and transport provider, providing as well an operator intervention and automatic rating adjustment to the user's trust level if inappropriate content is requested to be transferred;

Fig 14a graphically illustrates a geographical representation of an example shared transport network at a fixed moment in time, with pick-up locations and active vehicles in the shared transport network shown on a street map;

Fig 14b graphically illustrates a geographically simpler representation of the above network with all the street network segments that cannot be reached reduced out of the diagram to make it easier for the transport user to see what service is available;

Fig 14c graphically illustrates a representation of the above network with only those locations that are directly reachable without transfers, and only those vehicles that are relevant to the starting location of the transport user;

Fig 14d graphically illustrates a representation of the above network, showing the capacities and capabilities of the overall shared transport network, based on a stochastic model, which therefore is used to illustrate the capacity and capability of the network on average, at various day-parts, or using other criteria as specified by the system or by the user;

Fig 14e graphically illustrates a representation of the above network, coded with colors, icons, text, and/or line thickness to indicate the number of transfers, wait time, and potentially other factors, necessary for the transport user to reach their destination;

Fig 14f shows a representation of the above network, showing times of arrival for a given departure point, and whether a transfer was necessary from that point;

Fig 14g provides a table presentation of the above network, showing time of day output of a hypothetical stochastic model for a set journey start and end point;

Fig 14h provides a table presentation of the above network, showing a real time "Departure Board" for a given start point in a combined stochastic and real-time traffic and capacity model of the network; and

Fig 14i provides a table presentation of the above network, showing a real time "Journey Planner" for a given start location and destination location, with information including the available transport options, pricing, and arrival times using the transport method.

Referring to Fig 1., a person 10 desiring transportation service ("Rider") has a personal communications device 11, optimally equipped with location information ("GPS Phone"), and uses this device 11, optimally equipped with a software layer with transport intelligence ("Rider Software Interface"), to signal a transportation marketplace network ("Shared Transport Marketplace") 12 with a demand interest for a particular start-point ("Pick-up Point") and endpoint ("Destination Point", and together, the "Demand Route"). The Rider 10 has previously registered with the Shared Transport Marketplace 12, providing whatever registration details are necessary to contact and verify the identification of the Rider 10.

Alternatively, the Rider 10' may employ a fixed communications device 11' in order to communicate with the Shared Transport Marketplace 12.

At the same time, all vehicles that wish to provide transportation services which are in transit ("Transport Capacity") have a navigation device, typically using GPS or other location finding technology, with built-in or external data communication capability, typically using cellular phone or wide area wireless data networks ("Sat Nav Tracker"), running a software layer with a Shared Transport interface ("Driver Software Interface").

When a driver starts the vehicle ("Driver" 13), a Driver Software Interface automatically determines if the Driver 13 is engaged in a traditional route ("Supply Route"), and registers the transport capacity of the Driver 13 ("Transport Capacity") with the Shared Transport Marketplace 12. Alternatively, if the Driver is not engaged in a traditional route, the driver is prompted for their destination, or possibly is shown a list of riders possibly headed in the same general (or likely) direction as the Driver, for the Driver to consider sharing, if the Driver's destination is not known. This Transport Capacity would be then registered with the Shared Transport Marketplace 12.

The Shared Transport Marketplace 12, which is also accessible by any internet terminal, provides to the Rider 10 and to the Driver 13 information about Transport Capacity and Transport Demand. Optimally, this marketplace 12 is automatically populated with Supply Routes of public transport (buses, trains, commuter bus lines), to provide the Rider 10 with a variety of service types and prices to choose from. Additionally, given the on-demand nature of rides and personal transport, stochastic models can populate the Supply Routes and Demand Routes, in order to enable the Rider 10 and Driver 13 to make better transport decisions. For example, a Rider 10 in a subdivision of 500 homes at 8:30am on a weekday may poll for a Demand Route and see that the only options available from his house to his destination, e.g., Dublin, are a bus that leaves in 90 minutes for €4 or a taxi that could be available in 10 minutes for €35. Given these options, the Rider 10 would possibly be forced to choose a taxi. However, if the stochastic model indicates that 60 cars depart from that subdivision for Dublin every weekday morning between 8am and 9am, the Rider 10 could be provided the information that, with 90% certainty, a Supply Route would be available in 4 minutes

for €4.50. (That is, the Driver of this car in that subdivision simply has not turned on his car yet, and would only be in the subdivision for 2 minutes before leaving it for the highway. Therefore, the value of stochastic probable route offerings dramatically increases the quality of the information provided to a prospective Rider; and thus also increases the likelihood of Riders choosing to used Shared Transport in general). Means of displaying this capacity and providing useful decision-making ability to the Transport User are described in further detail below.

The Driver 13 could pre-register a specific price for a given transit route, or could change their price on-the-fly for a route to reflect the supply and demand for that Route, and the class of service provided (for example, charging more for a Rider who has excess luggage, or for direct point-to-point service by taxi transport, or for inclusion of in-vehicle wireless Internet access in places where that service is available).

Normally, however, pricing for a route would be determined by means such as per mile default rates, the number of seats occupied and other preset fixed and variable charges (zoned pricing, etc). While it is anticipated that some users of this system, particularly those Drivers with minibuses or even buses, could use it for profit-making routes, it is thought that normally the individual consumer user will simply be recovering some or most of their transport costs. Some applications may offer services without any charge or billing whatsoever.

One of the possible means, and the most likely, of determining positioning for the Sat Nav Tracker device 17 and the GPS Phone 11 is through the use of a GPS 14 or Magellan satellite as indicated in Fig. 1. Other means for determining position include

the use of cell phone towers to determine location, position look-up from WiFi hotspot data services, etc.

Use may also be made of the Internet as indicated in Fig. 1, as one of the means of communicating to and from users and drivers and from fixed kiosks to register trip requests.

The Rider 10, depending upon the mode preferred and the equipment available, can select a Pick-Up Point and Destination Point through a variety of functionally equivalent methods, including (1) calling a person or voice-response system via telephone whom they can tell verbally or through a DTMF IVR system; (2) using SMS via telephone, or e-mail, with text indication of Demand Route (i.e., "Go Home", or "Go from 12 Marlboro St to Albany Airport"); (3) via an Internet web interface or dedicated kiosk; or (4) via a GPS Phone with an intelligent and data-driven software interface.

The Rider 10, upon submitting a Demand Route into the Shared Transport Marketplace 12, could be presented with a sorted list of the transport options available, by class of service, type of vehicle, time until Transport Capacity arrives at start-point, estimated transit time to end-point, number of legs in the journey, and cost.

The Destination Point could also be specified by category or purpose, in order to increase the transport availability and options for the Rider. For example, if the Rider just wants to go to a shopping center, and there are 10 shopping centers in various directions, they could register the general category, and make their selection from the available transport options at that point. This could also be limited by brand, such as Starbucks coffee shops or RadioShack electronics stores; or, in the case of purpose,

the Rider could register a request to see a particular movie, regardless of the cineplex where the film was playing.

In the event that the Rider 10 has a Rider Software Interface on their phone 11, the Rider 10 selects from the options available to them. A message is sent to the nearest appropriate Transport Capacity. The Driver 13 is automatically guided to the pick-up point, optimally through the Sat Nav Tracker 17 display unit with verbal instructions. A Driver Software Interface determines if the Driver 13 is complying with the pick-up request, optimally based off the vehicle's movement and a period of time for the Driver 13 to automatically accept or deny the request ("Reserved Capacity").

In the event that the Rider 10 does not have a Rider Software Interface, the Rider can receive/respond to a message of available capacity via the means most conveniently appropriate to them (i.e., verbally, via text message, selecting at the Internet web site, and the like).

Confirmation is then sent to the Rider 10 via a message which optionally directs Rider to an alternate nearby optimal Pick-up Point in order to maximize transport efficiency. For example, if the Rider made a request on an infrequently used street, the Rider may be directed to walk a block or two to a Pick-up Point where Transport Capacity is available.

At any time up to the proximity alert warning period ("Three Minute Warning"), the Shared Transport Marketplace 12 will be working to optimize available capacity and services and will substitute Riders and Drivers, create multiple Riders at the same Pick-up Point to fill the Transport Capacity more efficiently, and the like. The Shared Transport Marketplace 12 will also monitor the Transport Capacity to see if any new

capacity has become available which offers a superior service and/or a lower price option to the Rider 10 (for example, if capacity is introduced which reduces the number of transfers necessary).

At the time of the Three Minute Warning, a message is sent to the Driver Software Interface and the Rider(s) with the information pertinent to the pick-up destination and the Riders. The Driver Software Interface then guides the Driver, optimally through audible cues, directly to the Pick-up Point.

At the time when the Rider needs to be in queue ("One Minute Warning"), the Shared Transport Marketplace will optimally automatically confirm from the Rider's GPS Phone 11 that the Rider is positioned within a certain proximity to the Pick-up Point ("Reasonable Rider Proximity"). If the Rider is not within Reasonable Rider Proximity, the Demand Route request is rescheduled and the Driver is informed that the Rider is not available ("Rider No Show").

At or before the One Minute Warning Time, a message would optimally be sent to indicate to the Rider to be on the lookout for the Transport Capacity, along with the specific color, model, picture and/or other identifying characteristics of the transport capacity that was arriving. If necessary, the Rider would also be provided with a PIN to verify their identity and booking.

Communications between the Sat Nav Tracker 17 and the communications network or the GPS Phone 11 can be accomplished from any one or a combination of a variety of direct or indirect data communications networks, including commonly used wide area networks such as GPRS, 3G, and other cellular communications traffic; 802.11 Wifi or Bluetooth or other similar local data communications networks (in

conjunction with, relayed and/or proxied by longer range communications networks as necessary), and other wide area networking techniques such as WiMax and other technologies that will be introduced in the marketplace from time to time.

Referring to Fig. 7, rider transactions and events are logged by the Shared Transport Marketplace (see elements 702, 704, 706, 707, 709), and if a disproportionately high percentage of Rider Demand Route requests result in Rider No Shows (for example, more than 1 out of 10) ("Unreliable Rider"), then the Rider 10 is tested for Reasonable Rider Proximity at earlier times, such as the Three Minute Warning period, and the Driver 13 will not be notified to pick-up this class of Unreliable Rider, unless the Unreliable Rider is already at the Pick-up Point, until such time as Rider No Shows passes a standard reliability as approved by the Shared Transport Marketplace.

Likewise, as illustrated in Fig. 7, a History for Driver transactions is logged by the Shared Transport Marketplace 12 (see elements 702,704,705,708,709). If the Rider 10 is waiting at the Pick-up Point and for whatever reason the Driver 13 does not pick up the Rider 10 ("Driver No Show") and/or is consistently late in picking up Riders, the Driver 13 would be measured for timeliness and Driver No Show rating ("Unreliable Driver"). Such lateness should include reasonable adjustments for consistently gridlocked locations such as city centers, as would be indicated through stochastic measurement of other Driver performance at the same Pick-up Point. The Driver 13 would likewise be expected to measure up to a higher level of performance to overcome an earlier unreliability, or the Driver 13 would be ranked lower ("Star Ratings"), matched less frequently, and/or possibly expelled from the Shared Transport Marketplace 12.

Although Riders/Drivers remain anonymous, system rankings are available, and Riders have the ability to only request Transport Capacity from Drivers with specified quality Star Ratings, and the like.

Transport Capacity optimally would have an external indicator ("Route ID Display"), optimally a bright display that is about the size and position of the passenger's side sun visor in a car, preferably mounted on the interior of the car, that optimally presents a visual confirmation of the route identification to the external Rider, so that as the Transport Capacity approaches, the Rider can begin approaching the Transport Capacity. While this Route ID 18 is somewhat analogous to the function served by a Bus Route Information display, the Route ID Display 18 has the following additional functions more necessary for a point-to-point, rider-by-rider shared transport network: Route ID Display 18 can be triggered automatically to become visually distinctive as it approaches a Rider Pick-up Point (analogous to the flashing lights of a School Bus as it stops to pick up children). As there could be hundreds of vehicles on the road that also provide Transport Capacity, this distinctive display serves the unique function of distinguishing the Dispatched Transport Capacity which has been matched to the Demand Route from other Transport Capacity which may be on the same road at the same time. In a low-tech, lower function incarnation, this could simply be a placard sticker with a fixed ID number.

As the Transport Capacity comes within a viewable distance ("50 meter display"), the Route ID Display 18 could show the particular Demand Route information and/or other Identification information (Personalized Route ID Information), for example, the readable distance ("20 meter display"), the Route ID Display could show the particular

Demand Route information and/or other Identification information (Personalized Route ID Information), for example, the Nickname(s) of the Rider(s) being picked up, the Destination Point(s) of the Demand Route(s), and the like.

As Transport Capacity approaches the Pick-up Point, the Driver would position the vehicle at the Pick-up Point, and optimally the Driver would be presented with a picture of the Rider(s) and the identification name of each Rider ("Nickname"). If the Rider does not match their picture, the Driver would choose to refuse the shared ride, and would submit, through the Driver Software Interface, the reason for denying the ride. (At this point, an operator of the Shared Transport Marketplace 12 would attempt to contact the Rider through the information provided with their registration details to see if there was a human error or to see if the Rider's GPS Phone had been stolen, in order to disable future Shared Transport Services). If a PIN were provided to the Rider, the Rider would be prompted by the driver to enter the PIN (or the driver would enter it himself), and the match would thus be verified, or the match could also be verified through the method of Continuous Co-ordinated Proximity, described below.

Upon a match-up of Rider 10 and Driver 13, Rider would enter the Transport Capacity vehicle ("In Process Journey"). The Shared Transport Marketplace 12 would then optimally verify, through the location information in the Sat Nav Tracker 17 and in the GPS Phone 11, that the Rider and Driver were indeed at the same location.

If the Driver 13 left the Pick-up Point area without picking up the Rider 10 (the Shared Transport Marketplace 12 could know this due to the divergence in location information between the GPS Phone 11 and the Sat Nav Tracker 17, as shown in Figs. 10a, 10b, 11a and 11b), the Shared Transport Marketplace 12 could send messages to

the Driver 13 and Rider 10 verifying that this was their intent; for example, if the Rider 10 had suddenly changed their mind, perhaps to go back to their house to get their umbrella. However, if the Demand Route was still needed, the Rider 10 and Driver 13 would be queried on their next action; for example, if the Rider wished to re-submit their Transport Demand request. In that case, the Rider's request would receive higher prioritization in the event there is a queue of Riders at the same location, so that the Rider would not have to return to the end of the queue.

When the Driver 13 approached the Rider Destination, and possibly at points along the way, the Rider 10 and Driver 13 could be polled for their location information to verify that the ride was progressing ("Continuous Co-ordinated Proximity" elements and methods of which are illustrated in Figs. 10a and 10b). Processing and communications could be done either locally (using software inside the Transport Capacity vehicle, in Driver Software Interface and Rider Software Interface, and communicating via near-field communications inside the Transport Capacity vehicle using software in Driver Software Interface and Rider Software Interface, via communications technologies such as Bluetooth, 802.11, RFID or their equivalents) or via network polling to Sat Nav Tracker 17 or GPS Phone 11, or a similar combination of methods and communications. The delivery of the transport service could be proven beyond a reasonable doubt through the continuous co-ordinated proximity between the Driver and the Rider according to the verification of simulaneous geographic proximity as illustrated in Fig 10b. At the end of this journey, a message would be send to Rider with the details and any billing information about the journey.

An alternative method of verification of continuously co-ordinated proximity would be to use the establishment and continuance of near-field communications as the primary consideration for determining start point of ride sharing experience, and use the breaking of this near-field communications between the Sat Nav Tracker 17 and the GPS Phone 11 (in cases other than power-off or reset of devices) to establish the verified termination point of the journey. The elements involved in this method are shown in Figure 11a, with the methodology shown in Figure 11b.

Alternately, in a low-tech (and only partially verifiable) implementation of the above, the verification of the Rider pick-up and delivery could be accomplished through the use of a PIN transmitted to the Rider, the entry of that PIN by the driver, and a lack of negative confirmation when the Rider is presented with the journey summary information.

Important aspects of the above system that were not mentioned in the above narrative: Trusted Drivers and Trusted Riders are a large part of the viability of any Shared Transport System. In order to improve on the quality of this trust, and to provide security assurance to Riders and Drivers, certain behaviors would prompt alert conditions, especially those related to security or safety. For example, when a Transport Demand is established which results in an In-Process Journey which is terminated before or at a different point than the established Destination Point, this information is logged and could further be used to generate, for example, automated phone calls to verify the intent of the Rider & Driver, including prompting the Rider or Driver for verification of pass codes ("Favorite Color") which would be established upon user registration. If a Rider or Driver was unable to verify their Favorite Color, human

intervention and responses and queries (from Network Operators, optimally, at a Network Operations Center (15), as shown in Figure 1) could escalate the situation response as appropriate, even initiating vehicle tracking and dispatching security personnel if appropriate.

Other methods of assuring that the Shared Transport System developed and maintained good social and safety standards would be a comprehensive ratings system. At the end of each journey, as the Rider leaves the vehicle, they are messaged with the details and cost of their journey on their GPS phone 11 (via SMS, e-mail, or via a special application or web page, for example). This message also could prompt the Rider to rate the Driver, for example, with 1 to 5 stars, on one or more scales (safety, comfort, social factors). A sufficiently low rating (for example, 1 star), could be used to automatically "blacklist" that Rider from ever matching with the Driver again (using the Matching Engine 701, as shown in Figure 7, in conjunction with the rating systems of the Transport Provider Management System 705 and the Transport User Management System 706).

Likewise, at the end of the driver's journey, as they stop their vehicle, they would be automatically prompted to rate the Rider(s) that they had carried on their Supply Route. Using the same or similar criteria, they would provide their feedback to the system about the rider. A sufficiently low rating would probably also prompt more requests for information, such as why the rating was so low.

Such an automatic feedback system would help police the network for bad behavior and thus encourage more responsible behavior on the part of everyone using the network.

The network system may also be provided with the following capabilities.

Real-time Self-correcting network redundancy elimination:

System feedback, in real-time, to a driver that another public vehicle or Shared Transport vehicle is available within set criteria (ie., with destination < 1/4 mile of theirs, with 0 or 1 transfers, with maximum of a 5 minute wait). If interested, the driver would receive the location/directions to a car park that is in-route.

Period benefit cost/time analysis:

System log periodically (weekly/monthly, for example) compares transit network availability with actual usage data from an in-car navigational unit and provides a trip-by-trip summary of which trips would have benefited through use of the Shared Transport Marketplace, what the cost/time savings would have been if the user had dropped their car at a Park & Ride; also, what the EARNINGS would have been if the user had picked up available fares (plus/minus 5 minutes); also, generic trip data about the average speed, journey time, CO_2 generated and gas consumed.

Additionally, network capacity demand can be used to calculate any possible public subsidy or tax credit benefit that can be awarded to potential drivers in exchange for their availability on their normal transit routes.

Identity Verification system:

Personal communications device could show the picture and name identification of the driver responding to pickup request.

Service Provider (Driver) display shows the picture of the Rider 10 (service requester in case of cargo or concierge) requesting pickup service.

Rider/Driver Proxy Messaging System

Normally Riders and Drivers would have no need or use for contacting each other directly; however, there could be a few circumstances where it would be useful for one to contact the other, such as in the event of a lost or found item in a car, or perhaps in certain rare cases where they need to reach each other to arrange exact transport details. Normally these users of the system may desire to keep their contact details and full identity information (such as name, e-mail or phone number) private.

Fig. 13 shows a message proxy system that would enable communications between members of the community without losing this identity, and also, importantly, disabling any inappropriate content or contact between community members as well as adjusting the rating of any community member as necessary.

In normal usage, the system would function as illustrated in Fig. 13. For example, if a Driver 13 identifies lost items left in their vehicle, they could choose a function on the in-vehicle device (or via a web page), to send a message to the Rider 10. The system 12 would then receive this message 131, evaluate the content for appropriate content 132, and if it could automatically determine this, would redirect the message 134 on to the Rider 10, coding the message with a unique identifier so that it would know to respond to the Driver 13 if the Rider 10 responds. If the system could not automatically approve the content of the message, the operator would review the content 136, and if the content was OK, the message would be passed on, but if not, the message would be rejected 138 and the Driver may receive a rating adjustment 137 and message to reflect the inappropriate use of the system. If the Driver's misuse of the system was sufficiently untrustworthy, the operator may choose to restrict the Driver's messaging

capabilities, blacklist the Driver 13 for future matches with this Rider 10, or make other adjustments to the Driver's ratings.

The network could generate near real-time messages using SMS, e-mail, or voice messages for example, or could, using a similar technique, proxy a phone call if desired and appropriate.

Friends & Family Transit network

Riders and Drivers can restrict Transport Capacity and Transport Demand matches to operate only inside closed communities of members, if desired. Such closed communities could be, for example, employees of a company, students and parents at a given school, or membership in a given social or sports association. These closed communities could be defined inside the various interfaces available as part of the Shared Transport Marketplace 12, including web pages, or could in fact be authenticated from other means, such as all those members of the Shared Transport Marketplace who had e-mail addresses ending in @mycompany.com or @myuniversity.edu.

The Network System could also allows users to tag drivers or riders as "friends and family" post ride, over the web in displays of private network drivers, or through e-mail opt-in.

Existing internet social communities could be used to instantly pre-populate the social communities that the user would want to make their Transport Capacity or Transport Demand known to, to help advertise and expand the reach of the Shared Transport network, or to match exclusively, or preferably, within the social community.

These "friends & family" designations would become part of the criteria used to rank available drivers and riders, where the rider or driver has a preference. Similarly, a rider or driver can tag the other as "not again", which could rank these alternatives lower or completely "blacklist" a Rider or Driver from matching directly with each other in the future.

Scheduled rides confirmation:

For rides which are pre-scheduled, software on the user device or through the network software will offer periodic warnings and require confirmation from a Rider a preset advance notification time (say 15 minutes) in advance of pickup, then again a preset nearby notification time (say three minutes) before pickup. The Rider has the option to delay or cancel pickup. The Driver is not routed off course or dispatch information sent until and unless rider confirms such pre-scheduled intent.

Advantages of shared transport system and service network

The invention thus provides a system that has the following advantages which have benefits to the area of public transport:

A. A matching system for transportation capacity with transportation demand. The System maintains a matrix of journey time and cost estimates for the nodes (pick-up and drop-off points). Next available capacity, and estimated travel time between each of these nodes is maintained.

B. A characterization method for summarizing transport capacity for individual drivers. Vehicles delivering transport services to commuters (trains, buses, planes) have long used the characterization of "stops" to summarize their transport network services in a way that the consumer could relate to (for example, the #6 subway line,

stopping at 34th St, Grand Central Station, 49th St, etc. However, for an individual driver on their personal daily commute, the typical characterization of a route is the start and end address. This characterization makes the matching of a driver journey difficult for a passenger. The introduction of computers or GPS systems to the problem doesn't necessarily make the solution any easier, as computers and GPS systems will often just reduce an address down to its geographic co-ordinates (latitude/longitude), or represent a drivers' route as a stream of latitude/longitude points.

The system herein described provides an automatic way of converting the computer's representation of a driver's route into a format which is more usable for further analysis and presentation. Figure 8a graphically illustrates an example driver's journey from their work location (Parnell Place, in City Center 802) to their home location (Kinsale 803, in the rural areas). The GPS unit of a car, when recording (or calculating) the driver's exact route, would represent this journey as a a set of co-ordinates. However, for the purposes of establishing a shared transport network, it is useful to establish a network of pick-up and drop-off points (nodes), so that Riders and Drivers can be guided to places that are safe and convenient and comfortable for both the Riders and Drivers. This network of stops can, for example, be pregenerated from existing databases of stops from existing bus networks, entered using traditional GIS systems, or in fact created by the in-vehicle system 17.

The route of the driver's journey is shown in Figure 8a as a dark line (801) moving from the north of the map towards the south of the map. The system calculates the places where the route of this line intersects a stop node, and thus can present the journey at the end of the route in the format of a very useful and concise set of major

stops, rather than an incomprehensible list of addresses or geographic co-ordinates. For example, the driver's route 801 can automatically indicate that the path of this route is from Parnell Place 802 to Cork Airport 804 to Farmer's Cross 805.

Furthermore, once the geographic representation is abstracted to stop nodes, it is possible to show the driver's route in a variety of alternate presentations, such as the presentation shown in Fig 8b. Here, we see the journey described with an abstraction of the journey start and end-points 811, where the start point is characterized by the town name; and we see a graphical presentation of boxes summarizing activity at each stop along the journey; and we can also see a level of characterizations. A busy city route may actually have many dozens of stops it could theoretically stop on if there were people waiting at the stop, but perhaps only the most major stops (as coded separately using operator intervention or data entry, for example) would be shown in order to present the information more clearly, The major stops of a route, as shown in 817, may not necessarily even include the start point or end point if they are not where the likely traffic would be, for example.

As shown in the elapsed time between stops 816, it becomes manageable to represent travel times between nodes using driver's journeys when organized as a stream of stop nodes. Likewise, stop nodes makes it easier to characterize capacity and frequency of travel between locations.

As graphically illustrated in Figure 9a, using the automatically generated driver's stop nodes to measure and predict capacity, it is also possible to show the real-time transport capacity of the shared transport network, and/or the predicted capacity from the stochastic transport capacity network model. This particular representation shows

the same network model as Figure 8a, but trimmed to only show those segments and nodes in the network that have active transport capacity on them at the time the user displays the model. This method of graphically presenting the reach of the transport network dramatically improves the confidence that a user would have in the shared transport model, knowing that they can get from one place to another, and knowing, through the stochastic model, what the availability would be at a different time of day.

Traditional transport networks have known this for a long time, of course, and so maps of network capacity have long been available on public transport systems, although they have not yet been applied usefully to carpooling systems or this invention of public shared transport. Traditional public transport networks have also sought to make their transport more understandable by simplifying the geographic maps into quasi-geographic schematic representations that enhance readability and information display by distorting the geographic accuracy in certain manners (using only orthogonal and diagonal lines, for example). The system could generate schematic maps automatically (several such programs and techniques are known in academia) using as its source the dynamically created transport network as generated by the real time and/or stochastic shared transport node model. An example of this schematization of a shared transport network is shown in Figure 9b, using the model of the 9a network.

C. An active monitoring system for generation of usage/demand data for point-to-point routing of participating vehicles. The system looks for overlaps of capacity and seeks to eliminate redundant capacity (within certain distance criteria, transfers criteria and timing criteria) by suggesting route changes or route termination. For example, if five cars were on the route to the same destination, the system could inform the cars

that the quality of shared transport service on their route was high, and could suggest that one or more cars pull over into a Park & Ride (for the Driver to become a Rider in another vehicle's car, as it would be far more economical than driving himself in a single occupancy vehicle to the same destination). Alternately, this monitoring system's data reporting and analysis can be used to suggest the generation of new routes, or on-the-fly routes, for public transport when enough demand capacity exists to create transport routes which bypass crowded city centers or, minimally, can skip stops on an existing route (generating express routes by selecting appropriate Riders to get on the transport capacity).

D. An active monitoring system for generation of traffic flow data; combined with a central information repository, gives real time network for traffic flow throughout a metropolitan area. . The system as described has the capability to enable any of the Transport Capacity vehicles to act as "traffic probes", reporting on throughput and delays in traffic. The system would use this data internally in order to better predict arrival time of Transport Capacity at the Rider's Pick-up Point, but this data could also be shared with the general transport community at large as a substitute for other means that they may normally use to determine road traffic (loop detectors, video cameras, traffic probes, etc).

E. A system to generate matches between route capacity and timing and Transport Demands, from usage data. Regular traffic between nodes and subsets of nodes is gathered by this system continually (Fig 7, elements 709, 710, 711, 712), The system 12 can thus tell a user who wishes to go from one point to the next how to best get there using the available transport capacity via it's matching engine (element 701).

A graphic illustration is shown in Fig. 14a. In this case, a Transport User 1401 wants to go from the departure point 1406 to the arrival location 1409. Active Transport Capacity 1402 and 1403 both pass by 1406 (as known by the system by the declaration of their Supply Routes. Whereas Transport Capacity 1402 has registered a route of 1405, 1406, 1407, 1408, Transport Capacity 1403 has registered a route of 1410, 1404, 1406, 1407, 1408, 1409. All other considerations being equal, the matching engine 701 would thus match the transport request between stop 1406 and stop 1409 using Transport Capacity 1403.

As other vehicles regularly travel between the nodes 1410, 1404, 1406 and 1409 at this time of day and day of week, the system would be able to reliably calculate how much time will elapse until the vehicle has arrived at the Transport User 1401's pick-up point, and would start the notification processes as detailed in the system appropriately. The system could also tell the Transport User 1401 at what time they would arrive at their destination 1409.

If Transport Capacity 1403 did not make their service available to Transport User 1401, the geographic scope of the search could be widened and the User could be alerted that an option exists that would get them to a drop-off location 1408 rather than the desired 1409 drop-off location, and the user could choose to accept this transport instead.

As illustrated in Fig. 4, Transport Capacity and Transport Demand will have a variety of providers (402) and users (403), with a potentially complex set of requirements and preferences (404, 405). The matching engine (401) provides the

Transport User with a means to display and/or automatically book the best options available.

F. Display methods to show available transport capacity and options to Transport Users. While no working system currently exists for the kind of real-time shared transport envisioned by this invention, the closest computing systems that perform a similar function are those car-sharing or carpooling schemes which attempt to match riders by destination and origin, for the purpose of establishing one-time or regular commuting matches. A major weakness of current state-of-the-art systems for carpooling is the limited representational capability of these systems, as it is usually difficult to find if there are any services on offer in a given neighborhood or area, to a given neighborhood or area. Current state of the art systems assume that no transfers are possible between shared transport providers or public transport, and work best when all of the users of the system have a common shared destination or origin (for example, commuters to a given campus, students at a university, or (when trips are to be made across country), members of a given urban area). The present system, however, generates a number of representations of transport capacity which will give encouragement to transport users and providers that service is possible using the present system.

From the live usage data of the system, maps can be presented which show the real-time capacity of the system. As graphically presented in Fig 14a, live maps could be displayed which show the real time transport capacity of the network and the stops in the network. However, these maps by themselves do not provide a sufficient quality of information to give confidence in the likelihood of a user being able to get from their

start point (1406) to their destination point (1409). Fig 14b demonstrates a more useful presentation of the street network, which begins to inform a user how they would use the shared transport network to reach their chosen destination, or what kind of service availability they would have using the system.

. Until a certain critical mass is achieved in a given geography, transfers to non-commercial private transport vehicles will be limited, and so it is important to also be able to show representations of the transport system showing all possible destinations where no transfers are necessary. This is graphically illustrated in Figure 14c.

G. A prediction system to generate available route capacity and timing from summary usage data. Traffic data is essentially stochastic, and therefore this system provides predictions of transport capacity between points in a way that can be useful to transport users in matching their transport needs and in providing them with useful information that makes them grow to trust the system and make better transport decisions. . Because the nature of this system is extremely ad-hoc, few bookings will be matched far in advance for a specific transport capacity. The best capacity for the journey is the capacity flowing by the transport user as they need it. While this approach enables a large number of advantages, the central weakness to this approach is in the uncertainty of a booking, both in terms of its timing and the provider of the service. Therefore, it is particularly important that this system provide excellent information services which overcome these uncertainties.

As mentioned above, usage data for this system is continually gathered. Beyond the use of this real-time information for the benefit of matching is the categorization of this usage data into a transport model (Figure 7, items 701, 702, and 702). This

transport model would contain day part information for traffic capacity flows. Thus, even if a transport demand were made that did not currently have transport capacity available, the model would be able to stochastically determine the likelihood of service, at any part of the day. This is graphically depicted in Figure 14d, where the historical availability of transport capacity is represented by lines in the street network. Of course, instead of using a street map presentation of wait times or capacity, a logical schematic of the network amongst transport stops could also be formatted to similarly display timeliness and throughput. As shown (1434), the map or schematic could be shown for any day or time period.

In many uses, of course, a tabular representation is preferable and augments the understanding of a network, and from the generated capacity model, tables such as that presented in Fig 14g would be generated to approximate the appearance of timetable schedules of traditional transport providers, such as city bus or subway networks. These timetables would of course be based off the ad-hoc transport capacity as driven by transport providers over time. These forms of definitive and statistically useful information will help transport users gain the confidence in the viability of shared transport, as well as be aware of better options that they may want to consider. For example, referencing the combination of Fig 14g for tabular data and Fig 14e for graphical presentation of a given transport user 1449, we can see that the tabular presentation shows that from the start point 1471 of the transport user (1441 on the map), to the destination point 1472 (1442 on the map), the general availability would be better at location 1443 (1473), where the average waiting period 1475 being less than

that at location 1444 (1474). However, for the most common commuting hours (7:30-10am and 4:30-7pm), the availability is similar.

Of course, in some cases drivers could be guided off their normal route to pick up passengers, and the system would be capable of doing that, but in most cases, it would be more desirable to pick up passengers without inconveniencing or disorienting the driver.

It can be readily appreciated how the availability of this information would enable users to make better commuting choices. In the table shown in Fig 14g, only two stops were shown and the rows were broken up by time of day and subdivided by stop; naturally, this information could be extended if desired into a larger array, or shown in a format of stops as columns, stops as rows with cells displaying average frequencies; or other typical timetable schedules.

The directionality of the transport traffic is also a major factor in the display of this stochastic information, and as shown in Fig 14e, the reverse route for a commuter transport user 1441 when returning home could appear very different graphically, depending on transport capacity usage history, from the opposite direction. Fig 14e also shows how a combination of historical data plus real-time data can be used to provide a blend of information to the transport user. This presentation of a blend of statistically generated timetables as well as real-time presentation of capacity would also be essential to the operations center staff in helping transport users understand their options as well as influencing any marketing or operations plans they would have to expand the network, and could also be used to help determine automatically if there

are any unusual activities such as road closings or traffic jams, where the historical data and the real-time data varied significantly.

Using this system it can be extremely useful to display the combination of statistical transport models with real-time information in tabular format. Fig 14h graphically illustrates one form of a "departure board" for a shared transport network. Departure boards, as seen often in airports, train stations and other transport hubs, provide the answer to the question "where can I go from here?".

Shared transport would provide a new opportunity for departure boards to be used in corporate campuses, lobbies, and other places where public transport has traditionally underserved the population. Shared transport departure boards could combine public transport information, private shuttle services, and shared transport services. While a preferred form of a departure board would be a separate physical display, it is of course possible to have departure boards take the form of web pages, a frame within web pages, or special "widget/gadget" style small programs that people could run on their portable phones or personal computing devices.

However, in the case where the transport service is not provided by scheduled services, the provision of a statistical transport model in conjunction with a real-time network is essential to providing this information, particularly in cases where the transport is leaving from within a campus (or housing subdivision) and moving out of range quickly. In a case where 15 vehicles leave a subdivision and head to a city center between the hours of 7:30 and 8:00am daily, it could be approximated that one vehicle moves between this journey's start and end points once every two minutes.

Consider again Fig 14e, where a transport user 1449 would like to find out what the availability of capacity is between start point 1441 and destination point 1442. Some transport capacity 1448 is positioned in a parking garage near the city center and also intends to go to destination 1442. As the transport capacity 1448 turns on their vehicle, they may only be within the area close to start point 1441 for a minute and two. As a result, if most of the transport capacity were coming from similar location, the transport user 1449 may not see the possible destinations until a few moments before they became available for matching, if at all.

As departure boards also serve the function of advertising the availability of transport options, the shared transport departure board would be under-representing the possible answers to the question "where can I go from here?" unless it includes a statistical model in the presentation of the departure board. Fig 14h shows a table combining real time network information with statistical network information. Here, Fig 14h is a tabular representation of Fig 14e, and the transport user 1449 wants to go from 1441/1481 to 1442/1482, Estimated departure times 1485 show two forms of numbers, perhaps graphically displayed with different characteristics, with real-time information for actual vehicles shown as indicated in 1486 and statistically established timing shown as in 1487.

Note also the departure board format would display major intermediate journey nodes 1488, as discussed above and calculated and characterized automatically by the system. Oftentimes, an end destination 1485 is not known by a viewer, and the intermediate points 1488 are the points of interest. As the purpose of the departure board is to improve the perception and communication of transport options, the

characterization of the path of stops , described above in the description of Figures 8a and 8b, further improves the transpor user's information experience.

H. A journey planner for a shared transport network. Journey Planners, which show best available routes between start point 1491 and destination point 1492 as well as cost and schedule information, are a well-known concept for public transport, but have not been used to describe non-scheduled transport services. As shown in Fig 14i, the Journey Planner would operate similarly to existing public transport network journey planners, but would also incorporate the statistical model of available shared transport 1495, and real-time shared transport information to provide best possible combinations between 1493, 1494 to provide the user with the widest range of useful options.

I. As the Shared Transport network expands, more transport capacity will become available regularly on certain routes. The system as described would be fully aware of which routes have underutilitized capacity, and would also be aware of transport users previously registered transport demands. Whereas normal public transport networks don't appear to have any awareness of who is using their services, the present system would communicate with its transport users to let them know about expanded hours of quality service (for example, less than 10 minute wait for services), and/or expansions of service into new outlying areas for that user, etc.

J. Governmental agencies and local authorities have long sought to encourage the use of carpooling, using incentives such as HOV (high occupancy vehicle) lanes, discounted tolls, and tax deductions for the use of public transport means. In the near future it is anticipated that further incentives may be brought to bear, given the extreme shortages of oil which are expected in the years of 2011 and beyond, as well as the

increased awareness of global warming. In addition, companies and organizations who are pressed for parking spaces are highly motivated to try to get their workers to carpool, and sometimes provide free or premium location car parking spaces to those who carpool. To increase the effectiveness and efficiency and compliance with these measures, it is anticipated that automated means may be desirable to authenticate the use of the vehicle in shared transport applications, as shown in Figure 12a.

In this access control system, a vehicle 1209 would approach an "access gate" 1208, for example, a toll booth 1204 or a parking lot access gate 1206. Whether the system was a server push or client pull system (Fig 12b, Fig 12c, Fig 12d, or Fib 12e), the information about the Shared Transport status and business rules would be processed at the Access Server 1207, and, if access was permissible, the gate 1208 would be lifted, allowing free or discounted access to the resources of the company or governmental agency. In fact, no gate 1208 would necessarily be required, as the system could be a tolling system which simply charges a different rate depending on the occupancy of the car, etc.

Throughout the year that the car is used, the usage of the car could be measured in terms of the percentage of time it was used for shared transport, and this could, if it passed a certain threshold, qualify the transport provider to benefit from certain tax benefits, carbon credits, and the like.

K. A trust system for managing networks of Transport Providers with varying trust characteristics. As shown in Fig. 7, the Transport Providers/Drivers are managed by a system 705 which considers their ratings (as provided to the system by an Activity and Event Manager 702) and their community memberships 713. This enables, as shown in

Fig 4, the Matching Engine 401 to consider matching transport demands with a variety of Transport Providers 402 and Provider criteria 404.

L. A self-correcting trust system for feedback of Rider response to Driver performance. As shown in Fig.7, when a Journey has been matched between a Transport Provider 720 (Driver) and a Transport User 721 (Rider), the Journey is actively managed by the system 704. As part of this process, the Rider is prompted to provide a measurement of trustability to the Driver. This event 702 is then passed on to the self-correcting trust system within the Transport Provider Data Management system 705.

M. A self-correcting trust system for managing Driver preferences of various Riders. Likewise, as shown in Fig 7, the Transport Provider is prompted to provide a measurement of trustability to the Transport User. This event 702 is then passed on to the self-correcting trust system within the Transport User Data Management system 706.

N. A modification of the above system to allow it to be used to transport goods and merchandise by having the Transport User send packages instead of using the system for personal transport., but otherwise using a similar Shared Transport Marketplace for matching transport need and rating of providers.

O. The Driver can also be driving a bus (whether a private or public transport service), a taxi, and the like.

Referring to Fig. 2, the transport capacity computing and communications components of the network system include components for (1) location and direction, many of which can supplement the locational accuracy where GPS technology is not

functional or is less desired (for example, underground transport forms would be more likely to use fixed position "markers" to determine the location of the transport capacity, and in the same underground transport situation, the GPS Phone would ideally be equipped with 802.11b technology and a reference database of positional location of underground wireless 802.11b or similar local wireless networking broadcasting devices in order to determine location and facilitate data communications); (2) Far-field communications list some of the communications methods used to facilitate interaction with the Shared Transport Marketplace, including the possibility of using voice or IVR interaction with a system operator rather than data networking; (3) Near-field communications detail methods would could be used to communicate between Rider and Driver computing/communication devices (preferred in order to reduce data congestion and airtime charges); (4) supply routes include those information sources and database of commonly used and widely known location names that will feed the Shared Transport Marketplace with available and potentially available transport capacity from the Driver and public transport sources; and (5) Demand route, which includes several possible methods of requesting a route by a Rider. The devices and inputs used by each of these five components are as listed.

Referring to Fig. 3, the rider technology components of the network system include components for (1) Location, that is, several methods for determining the exact position of the Rider for communication to the Shared Transport Marketplace; (2) Location transmission, that is, the interface that the Rider uses to transmit his Demand Request; (3) Computing Component, that is, the device that the Rider uses to transmit his Demand Request; (4) Internet, that is, either the broad Internet or a limited Intranet

which enables the data transmissions between the Shared Transport Marketplace and the Rider; and (5) Demand Route, which includes many of the databases and the pricing and membership models which enable a given Rider to take advantage of a variety of possible types of Transport Capacity. In addition, the devices and inputs used by each of these five components are as listed.

Referring to Fig. 4, the multiple uses and operations of the network system are shown graphically and include components for (1) Supply Side Routes, which include the databases of providers of shared transport services, (2) Demand Side Routes 407, which include a subset of possible methods for a Transport User 403 to request a Route, (3) Request Methods 408 and Availability Methods 406, which include a variety of methods which could be used to communicate between the Rider, Driver, and the network system. The Matching Engine 401 would consider the availability of transport capacity, provider criteria 404 and transport demand criteria 405 in providing ideal matches for the request.

Referring to Fig. 5a, the experience of a rider in using the network system are shown as a flowchart and are believed to be self-explanatory, as they have been described in text above. Use of specific references to time, ie., "Three Minute Confirmation", are completely configurable by the user and would be changed either automatically or manually to reflect different modes of transport and interchange or uses of the general system The accompanying table, Fig 5b., provides further specifics on data and usage of the functions in the flowchart of Fig 5a. The experiences may stored in memory and printed out.

Referring to Fig. 6a, the experiences of a Driver in using the network system is shown as a flowchart and are believed to be self-explanatory, as they have been described in the text above. The experiences may stored in memory and printed out. The accompanying table, Fig. 6b, provides further specifics on data and usage of the functions in the flowchart of Fig 6a.

Referring to Fig. 7, the Shared Transport Marketplace will be composed of a number of computer servers networked together to perform the data and communications functions as specified. Communications interfaces 723 will enable the system to communicate automatically between other automated computer systems, to individuals via computer interfaces, to individuals via telephonic interfaces, Sat-nav units, and the like.

Continous Co-ordinated Proximity System

In order to improve the user experience and the rapidity of verification of transport user ID and thus reduce the delay of loading people or goods into a transport vehicle, it would be desirable to have means to quickly verify the identity of the transport user for the transport provider, in order to know that the passenger is a paying and trustable passenger, as well as to confirm the drop-off location of the transport user.

Referring to Fig. 10a, the elements necessary to determine if there exists continous co-ordinated proximity are the monitoring and verification system 1001, a Transport User Device 1002 and a Transport Provider Device 1003. Each of the devices 1002 and 1003 would need to have a means to determine their location. Additionally, for the "independent verification" method, there would need to be far-range data communication means 1005 and 1006. Optionally, there can also be

communications between the devices 1002 & 1003 via a far-range or near-field data communications means.

Referring to Fig. 10b, the logic necessary for a central server to determine if there exists continuous co-ordinated proximity by the method of independent verification is shown in the flowchart.

Referring to Fig. 11a, the elements necessary to determine if there exists continuous co-ordinated proximity via verification of near-field communications link are the the monitoring and verification system 1101, a Transport User Device 1102 and a Transport Provider Device 1103. Additionally, for this "near-field communications verification" method, there would be near-field data communication means 1104 between devices 1102 & 1103. Optionally, there can also be communications between one or more of the devices 1102 & 1103 via a far-range communications means 1105 or 1106. In the near-field communications method, one or more of the devices 1102 and 1103 need to have a means to determine location. The logic for the determination of continuous proximity, as shown in Fig 11b, would run on either device 1102 or 1103, though more likely on the Transport Provider device 1103. The communications with the Monitoring and Verification system 1101 would be between the device running the logic as shown in Fig. 11b. In the event that the data does not need to be communicated real-time, or in service areas where there isn't continuous data communications capacity, the logic system could cache the start and end positions of the transport service between devices 1102 and 1103, or a plurality of other such transport services, and when the logic system does come into networking contact of Monitoring system 1101, the entire cache could then be transmitted.

Using such a cache system would have the following benefits: reducing the data communications expenses by sending less transmissions, increasing the areas of service to include those areas where data communications is unavailable, and, where no far-field communications are needed at all, reducing the hardware requirements of a continuous co-ordinated proximity service. In this case, the transport provider would have to, perhaps daily, come in contact with a near-field communications network.

Hardware and Software Components

Transport User Device

Optimally, a GPS phone with an ability to display graphics, serving the primary functions of enabling Transport User to book travel, receive updates on travel information, confirm bookings and receive activity receipts, provide proof of identity and location, as well as update trust ratings on providers in the network.

Transport Provider Device

Minimally, a GPS phone with an ability to display graphics. Optimally, a personal navigation device or built-in sat-nav unit, serving the primary functions of enabling transport provider to advertise spare transport capacity, route the driver to pick-up locations, confirm or cancel bookings, provide proof of identity and location, update trust ratings on transport users and suitability of geographic locations.

Network Operations Center

Computers and Display systems networked to the Shared Transit Marketplace Server, with telecommunications capacity for call center and operations staff, serving the primary functions of enabling the booking of travel and conveyance of information about network services, customer inquiries, management of physical and logical and

transportation network capacity and organization, and the business management of transport operations.

Shared Transit Marketplace Server

A network of computers attached to the Internet and telecommunications services. Providing automated functions for the Network Operations Center, Transport Users and Transport Providers, including matching demands, refining trustability ratings, optimizing capacity and efficient throughput of the system.

Characteristics of the Shared Transport Marketplace Method

a) providing an electronic registry of capacity containing a plurality of geographic locations, where one or more electronic devices in each of a plurality of transport vehicles registers the spare transport capacity and location information of the vehicles via wireless data communications to the registry of capacity,

b) providing an electronic registry of demand, where the transport demand needs of a plurality of individuals or items is registered by a plurality of means to the registry of demand by the transport user,

   i. where such plurality of individuals or items can include registration via Internet web pages and Internet applications, via SMS messages, via e-mail, via IVR systems, via telephone operators, via applications or web pages running on handheld wireless devices such as location-aware phones, and the like

   ii. where such demand can be limited to a set of rules not just between start and destination locations and needed capacity of seats or space, but also

include such limitations as requirements for the transport provider to be of a certain level of experience, gender, or membership in certain closed communities, or for the transport capacity to have certain conveniences or services, such as baby seats, wheelchair access.

(a) where such closed communities may include persons associated with a certain company, university, social group, or Internet social networking community, for example.

iii. where such demand can include destination locations that are specified by purpose of journey or type of destination, increasing the availability and timeliness of transport options to the transport user.

(a) where such type of destination could be specified to be any typical consumer or business category, such as supermarket, shopping mall, coffee shop, or a specific brand of these,

(b) where such purpose of journey could be one or a combination of factors, such as to see a specific movie title, regardless of the cineplex where it was showing.

c) providing a central processing capability in each or in a plurality of geographies to provide one or more matches of the transport capacity with the transport demand,

i. according to any specific limitations the demand may restrictively preset, and any predetermined trustability parameters set by the transport demand and the transport capacity.

(a) including trust parameters, such as the sex or experience of the transport provider or transport user

(b) including demand requirements, such as the availability of a child seat or wheelchair access

(c) including trust parameters restricting matches to those within a set of pre-approved transport providers or transport users from a given company

(d) including trust parameters restricting matches to those with membership in a pre-defined social group, club, or Internet community.

(e) including trust parameters restricting matches to those with sufficiently high transport community ratings,

1. providing a self-correcting system to the community of transport capacity providers and transport users to continuously update transport provider and transport user ratings,

d) providing a means of automated communication with the transport capacity to confirm the availability and willingness of the capacity to transport the demand; and likewise providing a means of automated communication with the transport demand to confirm the booking details of the capacity;

i. providing a means to direct the transport capacity to the geographic position of the transport demand(s), and automatically redirecting the transport capacity to the meeting point location of the transport demand if transport capacity needs to be re-routed,

ii. describing booking details to the transport demand of the transport capacity including such possibilities as, the time and location of the pickup along with identifying characteristics of the transport capacity and booking confirmation information.

(a) where, depending on the timeliness reliability rating of the transport user, notice of the transport capacity must be confirmed at an earlier time than otherwise required.

e) providing a means of tracking the pick-up and delivery of the transport demand by the transport capacity

i. automatically re-allocating and rescheduling a missed pick-up to other available transport capacity in the registry of transport

ii. providing a registry of missed pick-ups which is updated whenever the Transport Provider fails to pick up the Transport User who was in position at the Transport Start, where the missed-pick-up registry is used as a factor in the rating system for the transport Provider.

iii. providing a report of missed pick-up to a network operations center to provide for manual intervention if necessary.

iv. providing a means of verifying and vetting the truth and authorization of the transport provider and the transport user

(a) where such means of verification of the pick-up of the transport capacity by the transport provider can be accomplished by methods including

1. entry of a PIN (personal identification number) provided by the transport user to the transport provider and entered on the in-vehicle system.
    1. where such PIN could be generated automatically and communicated to the transport user upon confirmation of the transport capacity via automated communications (SMS or e-mail or IVR) in the booking details.
2. near-field communications between the in-vehicle system and the transport user's personal communications device (or other ID, including payment ID), verifying the transport demand's physical presence.
3. automatic determination of continuous proximity between the transport capacity's geographic location with the transport demand's geographic location, by periodic confirmation by the central tracking system of the location of the in-vehicle device and the personal communication device.
4. interaction, either through data or through verbal communication, between the network operations center and the transport provider and the transport user, using predetermined pass codes to confirm the identity and testimony of the transport provider and the transport user.

2. providing the transport user's proof of delivery to the destination location by the registration of route positions and timing of the transport

capacity via automatic communication between the in-vehicle device, by the confirmation of the transport provider and the transport user.

1. where the confirmation of the transport provider and the transport user can be automatically provided by electronic devices, or by the co-ordinated proximity method, or by the breaking of near-field communications between the transport user and the transport provider, or by a services message receipt which remains uncontested at the destination location.

Characteristics of the network operations center

f) bringing service irregularities to the attention of operations personnel,

g) alerting such personnel to events from missed pick-ups to occasions, such as a transport provider who is off-route from the destination location of the transport capacity ("errant vehicle").

h) providing automated escalation of response, depending on safety and security preferences and needs, whereby potentially dangerous situations are rapidly escalated for manual intervention of operators at the network operations center or security or public safety personnel,

i) providing an ability to continuously track the physical location of an errant vehicle and the transport capacity.

j) providing the capability of booking services to those who don't use more automated means, with the network operations personnel booking the request, or answering requests for information, for the telephone caller.

Additional Secondary Registry of Transport Capacity

An additional secondary registry of transport capacity may be added to the system

-to allow transport capacity to see both the shared transport network data and network data of public and private transportation network operators,

-to show the transport user whichever network services best fits their demand

-to book transport capacity on the shared transport network or with public and private operators.

i. providing similar notification and cashless transaction benefit to users of both public transport and shared transport.

   (a) where the public or private transport operator has an existing system with PIN authorization, or an integrated ticketing system compatible with the shared transport system, providing necessary authorization and PIN to the transport user.

   (b) where the public or private transport operator has no existing system for PIN authorization, providing the transport operator with the in-vehicle device, or a commercial version of the same.

ii. enabling the benefit of reduced tax consequences for those governmental entities that allow pre-tax deductions or credits for transportation expenses as detailed.

The transport capacity can be registered automatically, by simple movement of the vehicle indicating the direction and destination of the transport capacity:

- where the destination of the vehicle is predetermined by a route or schedule pre-registered by the transport capacity;

- where the destination of the vehicle is determined by comparing its position and timing to predetermined schedules associated with that vehicle

The usage of the system by transport providers and transport users can be tracked:

- providing a registry of service credits provided by transport providers and transport users, including,

i. interchanging services with all other members of the network, providing documentation to eliminate taxable consequences where local laws permit,

ii. reducing effective cost for the transport user where local laws permit by providing the transport user with an authorization system to credit the service credit system from their pre-tax income, either directed by the employer or by the employee,

iii. providing a detail and registry of usage which qualifies transport providers and transport users with information means sufficient to satisfy governmental laws to qualify for any tax credits or means for preferential road allowances and privileges which may be enabled through legislation,

(a) means for preferential road allowances shall include such preferential treatment such as access to HOV lanes, reduced or eliminated cost for such governmental programs as congestion charging, road usage charging, toll road access, parking and preferred-location parking.

(b) qualification for tax credits could include the computation of carbon benefits, vehicle registration taxes, annual road charges of using the invention over traditional means of transport.

(c) whereby information means to satisfy governmental authorization could include such means as real-time access to a central or proxy servers,

1. real-time access control including such things as barrier gate authorization at tolls, reduced charges for road usage when the vehicle contains more transport users or transport capacity, access to HOV lanes, or in parking lots.

iv. providing access control information for private or governmental users for parking or entry gates,

(a) whereby the approval of the access to restricted, preferred parking, or reduced charges for such, could be determined via real-time or near-real time access to the central registry (or its proxy), or an on-board device authorized by the activity of the transport capacity.

The system for tracking the usage of system by transport providers and transport users may comprise

- measuring the volume of journeys between a plurality of locations, where the volume of spare transport capacity is continually monitored by wireless communications with the location-aware vehicles,

- storing this information in a stochastic data model, which can then predict available capacity and demand between any point in the covered geographic regions of the network by time of day, day of week, and day of year,

- providing transport users and transport providers with means to retrieve information about the likely availability of transport capacity and transport

demand between any given start and destination locations, at a specific time of day or in general.

This latter system may also be provided with system means to retrieve information via real-time display on web pages, via SMS/e-mail, via IVR or operator-assisted verbal conveyance of this information. The information may be periodically sent to the transport user, or sent to the transport user when triggered by new services or higher quality options appearing in areas where the user has registered an interest or previously travelled using the system.

The system also provides for showing real-time, variable transport capacity on a display. To this end, the system:

- provides a registry which is able to store and display a series of destinations and times from any given departure area, along with other specifics

  i. including public and private transport operations

  ii. including departure points within a departure area (that is, gates, bays, or geographically distinct pick-up points in densely populated areas, modal interchange points, and campuses).

  iii. displaying major intermediate locations served by the individual routes

- shows the plurality of transport capacities passing the departure area

  i. where the display could be placed in the lobby of a corporate campus as a visual reminder as people leave work that there are other transport options available to them

ii. where the display could be shown as a web page, a frame or portal within a web page, or as a component of a user's configurable home page, portal, or social networking community,

iii. where the display could also be mounted as a conventional real-time passenger Information display at or near a conventional bus or public transport stop, with the added shared transport information displayed.

- shows the real-time departure needs of registered Transport Demands, as a means of stimulating Transport Capacity market for more capacity.
- calculates and displays a real-time network map of available transport in the shared transport network, where such map is a graphic representation (like a subway network of a city) of the available destinations reachable by the transport network.

The display of transport capacity may include the stochastic availability of transport capacity between locations, such as, for example, average availability of spare capacity every 5 minutes between 8am and 9am from Portarlington to Dublin.

The transport capacity has the ability to provide one or a plurality of ratings for the transport demand, after the demand has been satisfied. These ratings of the transport provider and transport user can be affected by issues, such as their proclivity to miss reserved meetings or not pay for their transport usage.

The transport capacity can visually signal its arrival at a meeting place by distinctive, externally visible indicators, e.g. one or a plurality of light emitting devices attached to the side of the vehicle's navigational system which faces in the direction of the driver's trajectory and/or the side of the navigational system which is in the direction

of the face of the car, or attached to the rear side of the passenger's side sun visor of the car, or triggered by an in-vehicle system, but would use built-in external lights of the vehicle displaying in a set pattern to indicate pertinent information.

The externally visible indicator could also contain a particular message which would match with a code corresponding with the transport capacity's details. The message could be the name of a passenger or destination of the transport capacity or could contain a portion of a confidential Personal Identification Number that the transport capacity would have received in its confirmation message of the transport capacity.

Automatic verification of the delivery of transport services by independent confirmation of continuous co-ordinated proximity can be performed. For example, two different devices, one possessed by the transport provider, and the other by the transport user, with each having separately determined but accurate location and time information (for example, GPS phones) can be asserted to be verifiably in transit with each other through their continuous co-ordinated proximity. This assertion could be used as a verification of services provided or services used for the time and distance spent in transit, with related charges. This enables billing for the delivered service.

Further, two different devices can be used, one possessed by the transport provider, and the other by the transport user, with at least one having accurate location information, but both having a means to determine their continuous proximity to each other. One example of a means of determining continuous proximity would be the continuous presence of a near field wireless link (such as two devices with bluetooth or 802.11b).

Where both devices have live wireless data transmission capabilities to some central server, to provide independent confirmation of continuous proximity with link, reducing possibilities of fraud.

The invention thus provides a system that enables regular highway traffic and privately owned personal transport systems to augment and enable public mass transit networks.

The invention also provides a system that can match a rider's needs to move from one geographic point to another geographic point with an unrelated driver's unused transportation capacity.

The invention further provides an ad-hoc shared transport system for matching transport capacity with transport demand across a plurality of transport providers and a plurality of transport users.

What is claimed is:

1. A method comprising the steps of

providing a transport user device for identifying a transport user;

providing a transport provider device for identifying a transport provider;

triggering registration of the start of a transport journey in response to a communication of said transport user device and said transport provider device with each other,

performing a continuous coordinated proximity monitoring to verify the identity of a transport user and a transport provider vehicle, and

triggering registration of the end of said transport journey through communication of said transport user device and said transport provider device with each other.

33. A method as set forth in claim 1 further comprising the steps of polling each of said devices to determine their positions, calculating differences between the determined positions and determining that a journey has ended in response to said differences being outside of an acceptable range.

34. A method as set forth in claim 1 further comprising the steps of having said devices communicate with each other using a near-field communication means, and determining that a journey has ended in response to said devices being outside of a range.

Abstract of the Disclosure

The network system triggers registration of the start of a transport journey in response to a communication of a transport user device and a transport provider device with each other, performs a continuous coordinated proximity monitoring to verify the identity of a transport user and a transport provider vehicle, and triggers registration of the end of the transport journey through communication of the transport user device and the transport provider device with each other.

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