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10 Attorneys for Plaintiff,
11 ProconGPS, Inc.

12 UNITED STATES DISTRICT COURT
13 NORTHERN DISTRICT OF CALIFORNIA

14 **CV 11 3975**

16 PROCONGPS, INC., a Tennessee
17 Corporation,

18 Plaintiff,

19 v.

20 STAR SENSOR, LLC, a California
21 Limited Liability Company; JIM
22 SCHUMACHER, a California Limited
23 Liability Company (d/b/a GPS Vehicle
24 Finder); JIM SCHUMACHER, an
individual; TONY RANGEL, an
individual; SKYPATROL, LLC., a Florida
Limited Liability Corporation,

25 Defendants.

CASE NO.

**COMPLAINT FOR PATENT
INFRINGEMENT**

DEMAND FOR JURY TRIAL

26
27 Plaintiff ProconGPS, Inc., by and through its attorneys, hereby alleges for its Complaint
28 against Defendants Star Sensor Technology, LLC, Jim Schumacher, LLC, Mr. Jim Schumacher,

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RICHARD W. WIERING
CLERK, U.S. DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
E-filing

SI

Mr. Tony Rangel, and Skypatrol, LLC, (collectively, "Defendants") the following.

PARTIES

1. ProconGPS, Inc. ("Procon") is a corporation organized under the laws of the State of Tennessee with its principal place of business at 2035 Lakeside Centre Way, Suite 125 Knoxville, Tennessee 37922 and facilities in Irvine, California, and is doing business in this district.

2. On information and belief, Star Sensor Technology, LLC ("Star Sensor") is a limited liability company organized under the laws of the State of California with its principal place of business at 5753-G E. Santa Ana Canyon Rd. Anaheim Hills, California 92807 and is doing business in this district. On information and belief, Defendant Star Sensor was organized by Tony Rangel, currently a member of Star Sensor.

3. On information and belief, Jim Schumacher, LLC ("Schumacher LLC") is a limited liability company organized under the laws of the State of California with its principal place of business at 367 Ogle St., Costa Mesa, California, 92627, and is doing business in this district.

4. On information and belief, Jim Schumacher is an individual residing in Newport Beach, California, and is the sole member of Jim Schumacher, LLC. On information and belief, Jim Schumacher also cofounded Star Sensor and is doing business in this District.

5. On information and belief, Tony Rangel is an individual residing in Chino Hills, California, is a member of Star Sensor, and is doing business in this district.

6. On information and belief, SkyPatrol, LLC. ("Skypatrol") is a limited liability company organized under the laws of the State of Florida with its principal place of business at 3055 NW 84th Avenue, Miami, Florida 33122 and is doing business in this district.

JURISDICTION AND VENUE

7. This is an action for patent infringement arising under the patent laws of the United States, Title 35 of the United States Code. Jurisdiction as to these claims is conferred on this Court by 28 U.S.C. §§ 1331 and 1338(a).

8. Venue is proper in this District under 28 U.S.C. §§ 1391 and 1400(b). On

information and belief, Defendants have committed acts of direct and/or indirect infringement in this judicial district and/or have purposely transacted business in the infringing goods and/or services in the State of California and in this judicial district.

9. On information and belief, this Court has personal jurisdiction over Defendants because Defendants transact business in the State of California and in this District. On information and belief, Defendants either directly or through intermediaries, solicited business, conducted and do conduct business, ship, distribute, offer for sale, and/or sell products and services in California and within this judicial district. Upon information and belief, Defendants derive substantial revenue from their acts of infringement within the State of California and in this District.

INTRADISTRICT ASSIGNMENT

10. This is an Intellectual Property Action to be assigned on a district-wide basis pursuant to Civil Local Rule 3-2(c).

THE ASSERTED PATENTS

11. On February 15, 2000, the United States Patent and Trademark Office ("USPTO") duly and legally issued U.S. Patent No. 6,025,774 ("774 Patent"), entitled "Method for Retrieving Vehicular Collateral." A true and correct copy of the '774 Patent is attached as **Exhibit 1**.

12. On June 19, 2001, the USPTO duly and legally issued U.S. Patent No. 6,249,217 ("217 Patent"), entitled "Method for Retrieving Vehicular Collateral." A true and correct copy of the '217 Patent is attached as **Exhibit 2**.

13. Procon is the exclusive owner of the '217 Patent and the '774 Patent by assignments filed with the USPTO on July 11, 2011.

BACKGROUND

14. Plaintiff Procon was established in 2002 to provide wireless security and mobile security products and services. Procon has grown to be the leading service provider of location-based products and services, including products and services that perform tracking based on global positioning System ("GPS") data. Procon has designed, developed, marketed, and sold

1 GPS tracking devices and solutions for several years. The GPS tracking devices from Procon
2 enable customers to locate and track vehicles across Procon's North American data network.

3 15. In March 2008, Procon entered into non-exclusive licenses for the '774 and '217
4 Patents from their prior owner. Using these licenses, Procon built their GPS tracking business
5 from \$15 million in 2007 to over \$70 million in 2010. On or about June 27, 2011, Procon
6 purchased the patents from the licensor.

7 16. The inventions embodied in the '774 and '217 Patents have helped Procon
8 revolutionize the vehicle finance tracking industry. Due to the enormous cost savings and
9 improved security provided by the method of recovering collateral as claimed in the '774 and
10 '217 Patents, auto dealers and financial institutions are able to offer their products and services to
11 a dramatically wider market.

12 17. On information and belief, Jim Schumacher is a former sales representative at a
13 reseller of Procon's products and services and is an experienced sales representative in the
14 industry.

15 18. On information and belief, in or about 2005, Jim Schumacher organized Jim
16 Schumacher LLC, an entity based in Costa Mesa, California, and doing business as GPS Vehicle
17 Finder, which operates an Internet website at <http://www.gpsvehiclefinder.com> wherein it sells
18 and offers for sale GPS tracking products and services which infringe the '774 and '217 Patents.

19 COUNT I

20 (Infringement of the '774 Patent)

21 19. Procon incorporates and realleges paragraphs 1-18 as if fully set forth herein.

22 20. Defendant Skypatrol has been and is now infringing, directly, literally and/or
23 under the doctrine of equivalents, and/or indirectly (by way of inducing infringement of others
24 and/or contributing to the infringement by others), the '774 Patent by, among other things,
25 making, using, operating, importing, offering to sell, and/or selling products such as Skypatrol's
26 Passport GPS tracking device, and/or offering to sell, selling and/or providing services under
27 programs such as Skypatrol's Fleet Management Solutions, Payment Assurance Solutions,
28 Vehicle Location services, GPS Tracking Solutions, GPS Tracking System and Buy Here Pay

1 Here programs, which implement methods of securing collateral that are covered by one or more
2 claims of the '774 Patent, including without limitation independent claim 1. Thus, defendant
3 Skypatrol is liable for infringement of the '774 Patent under 35 U.S.C. § 271.

4 21. On information and belief, Skypatrol's infringement of the '774 Patent is and has
5 been willful. On information and belief, as a result of a comprehensive analysis Skypatrol
6 previously conducted of the '774 Patent, the USPTO's June 28, 2011 publication of a Certificate
7 of Reexamination, and following a notification from Procon of the '774 Patent, Skypatrol has
8 been aware, or should have been aware, of the '774 Patent since its issuance on February 15,
9 2000.

10 22. Skypatrol did not cease its willful infringement of the '774 Patent. Skypatrol
11 disregarded and continues to disregard the fact that its actions constitute infringement of the '774
12 Patent. This risk of infringement was known or is so obvious that it should have been known to
13 Skypatrol.

14 23. Defendants Star Sensor, Tony Rangel, Jim Schumacher and Jim Schumacher LLC
15 have been and are now infringing, directly, literally and/or under the doctrine of equivalents,
16 and/or jointly and/or indirectly (by way of inducing infringement of others and/or contributing to
17 the infringement by others) the '774 Patent in California and in this district and throughout the
18 United States by, among other things, making, using, operating, importing, offering to sell, and/or
19 selling products such as the ES101 GPS/GPRS module and the LCS-1 GPS tracking device,
20 and/or offering to sell, selling and/or providing services under programs such as Star Sensor's
21 Fleet & Dispatch Solutions, Trailer Monitoring Solutions, Container Tracking Solutions,
22 Personal/Portable Solutions, Automotive Applications and/or other GPS tracking solutions
23 programs, which implement one or more methods of securing collateral that are covered by one
24 or more claims of the '774 Patent, including without limitation, independent claim 1. Defendants
25 Star Sensor, Tony Rangel, Jim Schumacher and Jim Schumacher LLC are thus liable for
26 infringement of the '774 Patent pursuant to 35 U.S.C. § 271.

27 24. On information and belief, Star Sensor, Tony Rangel, Jim Schumacher and Jim
28 Schumacher LLC's infringement of the '774 Patent is and has been willful. Star Sensor, Tony

1 Rangel, Jim Schumacher, and Jim Schumacher, LLC, have known or should have known of the
2 '774 Patent since its issuance on February 15, 2000. On information and belief, Jim Schumacher,
3 through Jim Schumacher LLC, was a reseller of Procon's products and services before
4 establishing Star Sensor, and knew or should have known of the '774 Patent, pre-existing
5 licensees of the '774 Patent, and the necessity for a license for Star Sensor, Tony Rangel, Jim
6 Schumacher, and Jim Schumacher, LLC to make, use, operate, import, offer to sell, and/or sell
7 products and services implementing one or more methods covered by one or more claims of the
8 '774 Patent.

9 25. On information and belief, Star Sensor, Tony Rangel, Jim Schumacher, and Jim
10 Schumacher LLC have not ceased their willful infringement of the '774 Patent, and disregarded
11 and continue to disregard the fact that their actions constitute infringement of the '774 Patent. On
12 information and belief, this risk has been known, or is so obvious, that it should have been known
13 to Star Sensor, Tony Rangel, Jim Schumacher, and Jim Schumacher LLC.

14 26. Upon information and belief, all Defendants committed these acts of infringement
15 without license or authorization.

16 27. As a result of Defendants' infringement of the '774 Patent, Procon has suffered
17 monetary damages in an amount not yet determined, and Procon will continue to suffer severe
18 and irreparable harm unless this Court issues a permanent injunction prohibiting Defendants from
19 infringing the '774 Patent.

20 COUNT II

21 (Infringement of the '217 Patent)

22 28. Plaintiff incorporates and realleges the allegations of paragraphs 1-27 as if fully set
23 forth herein.

24 29. Defendant Skypatrol has been and is now infringing, directly, literally and/or
25 under the doctrine of equivalents, and or jointly and/or indirectly (by way of inducing
26 infringement of others and/or contributing to the infringement by others), the '217 Patent by,
27 among other things, making, using, operating, importing, offering to sell, and/or selling products
28 such as Skypatrol's Passport GPS tracking device, and/or offering to sell, selling and/or providing

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1 services under programs such as Skypatrol's Fleet Management Solutions, Payment Assurance
2 Solutions, Vehicle Location services, GPS Tracking Solutions, GPS Tracking System and Buy
3 Here Pay Here programs, which implement methods of securing collateral that are covered by one
4 or more claims of the '217 Patent, including independent claim 1. Defendant Skypatrol is thus
5 liable for infringement of the '217 Patent under 35 U.S.C. § 271.

6 30. On information and belief, Skypatrol's infringement of the '217 Patent is and has
7 been willful. On information and belief, as a result of a comprehensive analysis Skypatrol
8 previously conducted of the '217 Patent, the USPTO's June 7, 2011 publication of a Certificate of
9 Reexamination, and following a notification from Procon of the '217 Patent, Skypatrol has been
10 aware, or should have been aware, of the '217 Patent since its issuance on June 19, 2001.

11 31. Skypatrol has not ceased its willful infringement of the '217 Patent. Skypatrol
12 disregarded and continues to disregard the fact that its actions constitute infringement of the '217
13 Patent. This risk of infringement was known or is so obvious that it should have been known to
14 Skypatrol.

15 32. Defendants Star Sensor, Tony Rangel, Jim Schumacher and Jim Schumacher LLC
16 have been and are now infringing, directly, literally and/or under the doctrine of equivalents,
17 and/or jointly and/or indirectly (by way of inducing infringement of others and/or contributing to
18 the infringement by others) the '217 Patent in California, in this district, and throughout the
19 United States by, among other things, making, using, operating, importing, offering to sell, and/or
20 selling products such as the ES101 GPS/GPRS module and the LCS-1 GPS tracking device,
21 and/or offering to sell, selling and/or providing services under programs such as Star Sensor's
22 Fleet & Dispatch Solutions, Trailer Monitoring Solutions, Container Tracking Solutions,
23 Personal/Portable Solutions, Automotive Applications, and/or other GPS tracking solutions
24 programs, which implement one or more methods of securing collateral that are covered by one
25 or more claims of the '217 Patent, including without limitation, independent claim 1. Defendants
26 Star Sensor, Tony Rangel, Jim Schumacher and Jim Schumacher LLC are thus liable for
27 infringement of the '217 Patent pursuant to 35 U.S.C. § 271.

28 33. On information and belief, Star Sensor, Tony Rangel, Jim Schumacher and Jim

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Schumacher LLC's infringement of the '774 Patent is and has been willful. Star Sensor, Tony Rangel, Jim Schumacher, and Jim Schumacher, LLC, have known or should have known of the '217 Patent since its issuance on June 19, 2001. On information and belief, Jim Schumacher, through Jim Schumacher LLC, was a reseller of Procon's products and services before establishing Star Sensor, and knew or should have known of the '217 Patent, pre-existing licenses to use the '217 Patent, and the necessity for a license for Star Sensor, Tony Rangel, Jim Schumacher, and Jim Schumacher, LLC to make, use, operate, import, offer to sell, and/or sell products and services implementing one or more methods covered by one or more claims of the '217 Patent.

34. On information and belief, Star Sensor, Tony Rangel, Jim Schumacher, and Jim Schumacher LLC have not ceased their willful infringement of the '217 Patent, and disregarded, and continue to disregard, the fact that their actions constitute infringement of the '217 Patent. On information and belief, this risk has been known, or is so obvious, that it should have been known to Star Sensor, Tony Rangel, Jim Schumacher, and Jim Schumacher LLC.

35. Upon information and belief, all Defendants committed these acts of infringement without license or authorization.

36. As a result of Defendants' infringement of the '217 Patent, Procon has suffered monetary damages in an amount not yet determined, and Procon will continue to suffer severe and irreparable harm unless this Court issues a permanent injunction prohibiting Defendants, their agents, servants, employees, representatives, and all others acting in active concert therewith from infringing the '217 Patent.

DEMAND FOR JURY TRIAL

Plaintiff Procon requests a trial by jury of any issues so triable.


PRAYER FOR RELIEF

For the foregoing reasons, Procon respectfully asks this Court to grant the following relief in favor of Procon and against Defendants:

- a. A judgment in favor of Procon that the Defendants have directly (literally and/or under the doctrine of equivalents), and/or indirectly (by way of inducing

- 1 infringement of others and/or contributing to the infringement by others) infringed
 2 one or more claims of the '774 Patent and one or more claims of the '217 Patent;
- 3 b. A permanent injunction enjoining Defendants and their officers, directors, agents,
 4 servants, affiliates, employees, divisions, branches, subsidiaries, parents, and all
 5 others acting in active concert or participation with them, from infringing the '774
 6 Patent and the '217 Patent;
- 7 c. A judgment and order requiring Defendants to pay Procon its damages (including
 8 a reasonable royalty and/or lost profits), costs, expenses, and pre-judgment and
 9 post-judgment interest for Defendants' infringement of the '774 Patent and the
 10 '217 Patent;
- 11 d. A Judgment and order finding that Defendants willfully infringed the '774 Patent
 12 and the '217 Patent, and trebling damages under 35 U.S.C. § 284;
- 13 e. A judgment and order finding that this is an exceptional case within the meaning
 14 of 35 U.S.C. § 285 and awarding Procon its reasonable attorneys' fees and costs;
 15 and
- 16 f. Any other relief as the Court deems just and proper.

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 18 Dated: August 11, 2011

19
 20 By: 

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28 *Attorneys for Plaintiff,*
 ProconGPS, Inc.

EXHIBIT 1



US006025774A

United States Patent [19]**Forbes**[11] **Patent Number:** **6,025,774**[45] **Date of Patent:** **Feb. 15, 2000**[54] **METHOD FOR RETRIEVING VEHICULAR COLLATERAL**[76] **Inventor:** **Mark P. Forbes**, 27758 Santa Margarita Pkwy., #314, Mission Viejo, Calif. 92691[21] **Appl. No.:** **09/103,419**[22] **Filed:** **Jun. 24, 1998**[51] **Int. Cl.⁷** **B60R 25/10**[52] **U.S. Cl.** **340/426; 325/384; 340/988; 342/457; 701/213; 705/38**[58] **Field of Search** 340/988, 989, 340/990, 426, 928; 342/457; 701/207, 208, 213; 180/287; 705/38; 235/379, 380, 384[56] **References Cited****U.S. PATENT DOCUMENTS**

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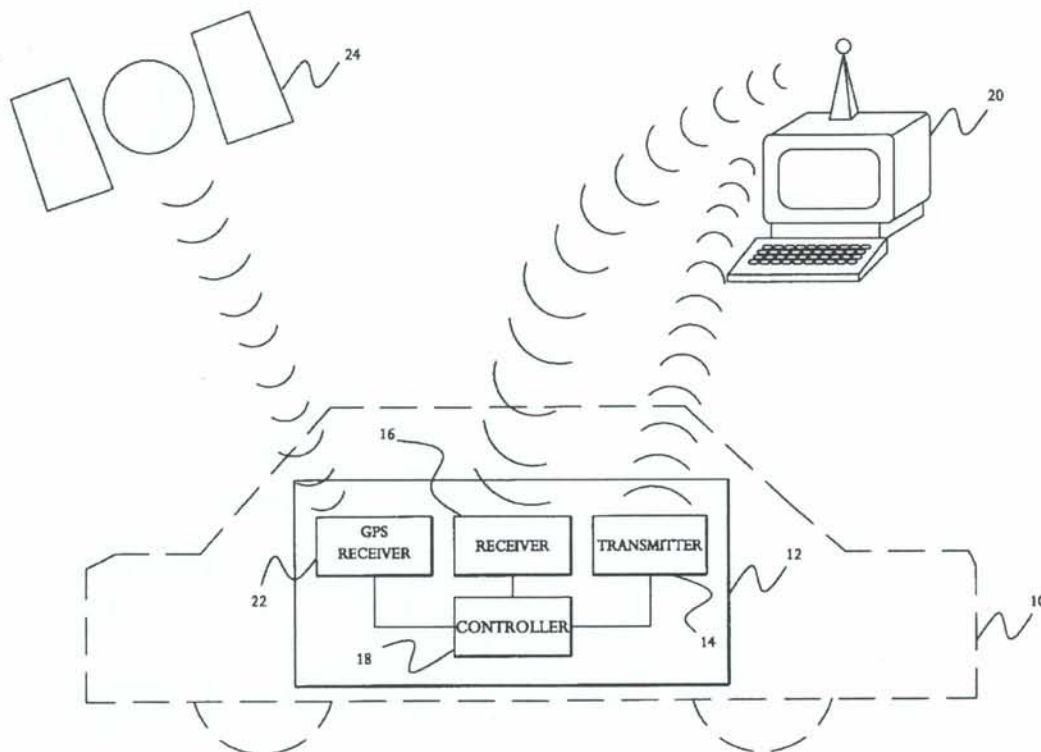
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OTHER PUBLICATIONS

Lo Jack flyer of 1 page "Lo Jack Protects Your Car . . ."

Primary Examiner—Brent A. Swarthout*Attorney, Agent, or Firm*—Stetina Brunda Garred & Brucker[57] **ABSTRACT**

In accordance with the present invention, there is provided a method of securing collateral for a loan when indicated by a loan status wherein the collateral is a vehicle. The method provides for installing a transmitter within the vehicle. The transmitter is capable of transmitting locational data regarding the vehicle. The loan status is monitored for a default condition. A data link is established from a base terminal to the transmitter of the vehicle upon an occurrence of the default condition in the loan status. Locational data is transmitted from the transmitter of the vehicle to the base terminal via the data link. The location of the vehicle is determined from the locational data transmitted to the base terminal. Finally, the vehicle is confiscated.

15 Claims, 2 Drawing Sheets

U.S. Patent

Feb. 15, 2000

Sheet 1 of 2

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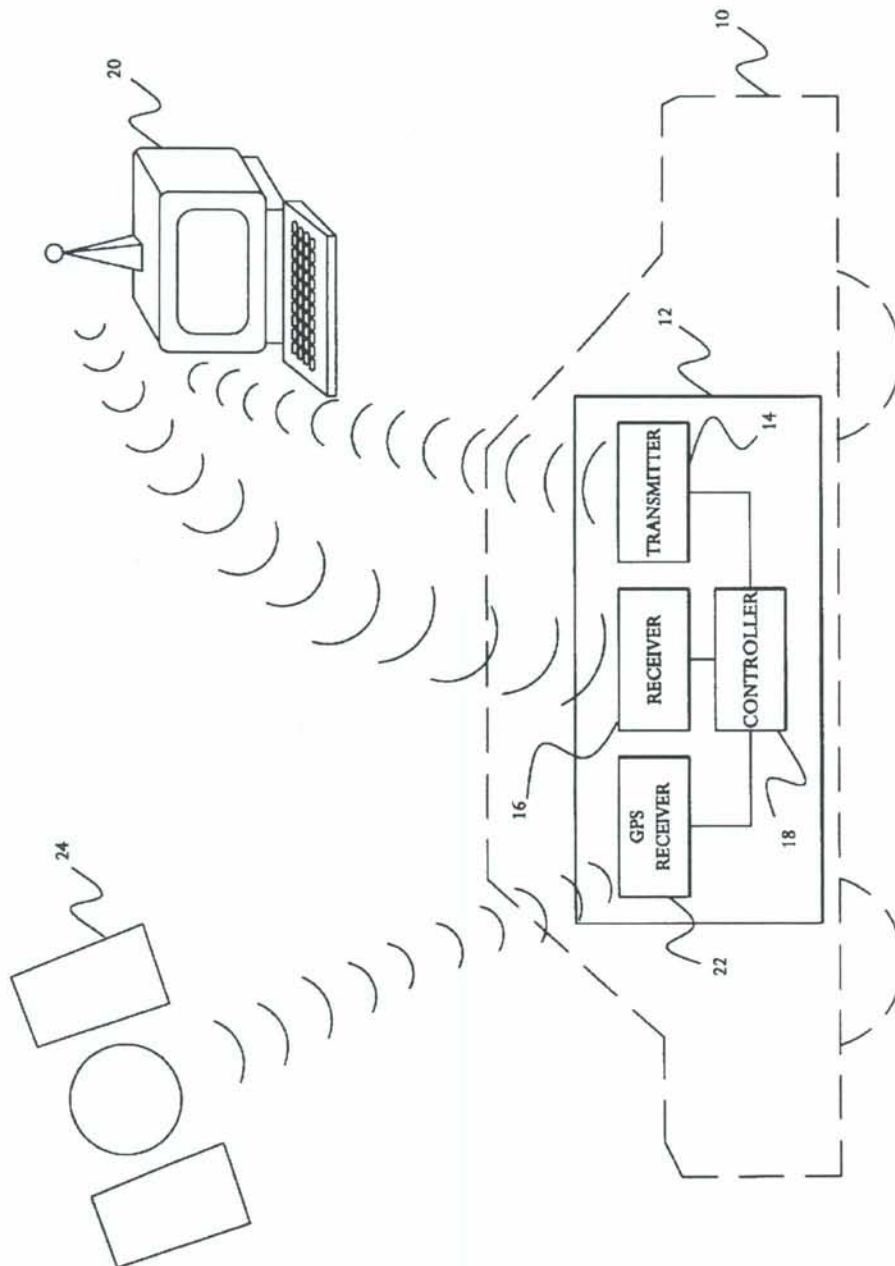


Fig. 1

U.S. Patent

Feb. 15, 2000

Sheet 2 of 2

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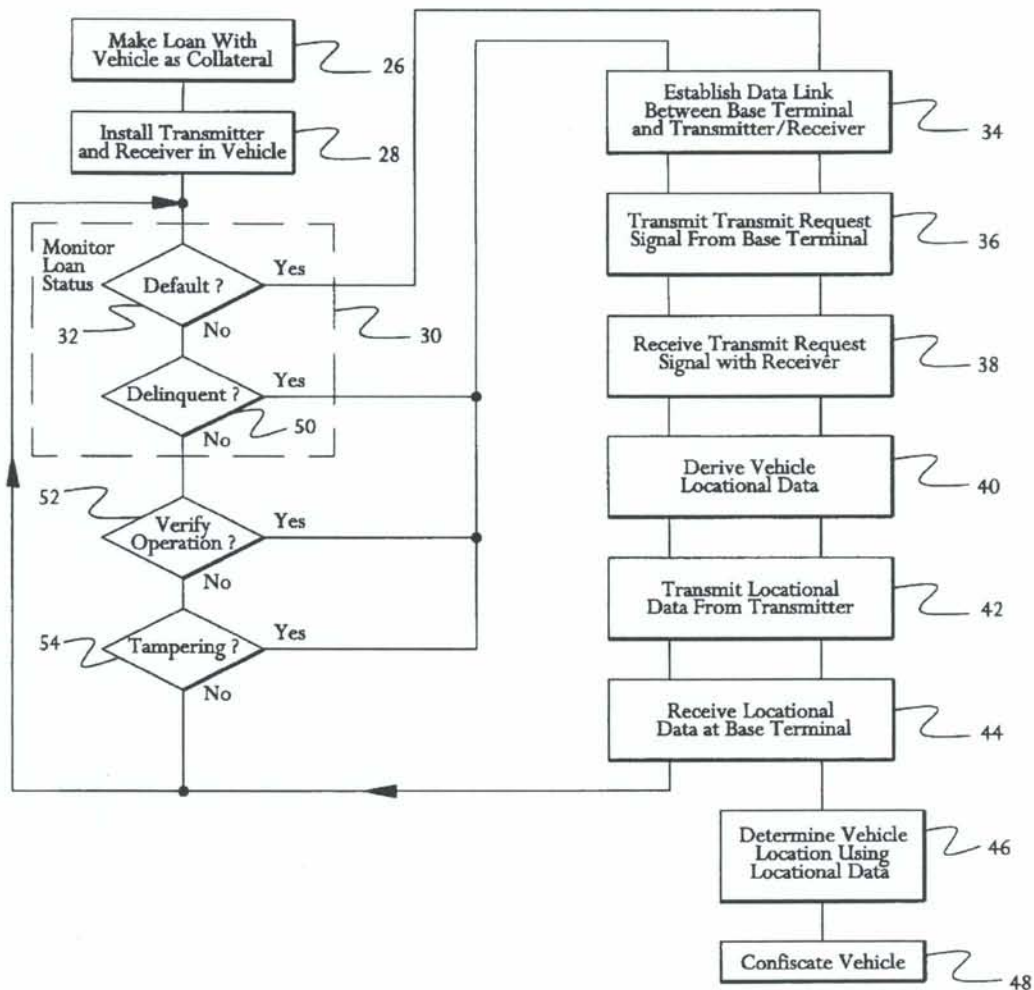


Fig. 2

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METHOD FOR RETRIEVING VEHICULAR COLLATERAL

FIELD OF THE INVENTION

The present invention relates generally to a method of collateral retrieval, and more particularly to a method of retrieving vehicular collateral in which a transmitter is installed in the vehicle which provides locational data.

BACKGROUND OF THE INVENTION

Generally, vehicles such as automobiles have been financed through a personal loan system, whereby the purchaser borrows money from a financial or lending institution, takes title to the automobile and pays the loan balance in monthly payments which amortize the full amount of the loan. Typically, the financial institution retains a lien interest against the title of the vehicle and the loan is secured by a chattel mortgage thereon. The financial institution may confiscate or repossess the vehicle upon a default condition of the loan, as agreed to by the purchaser or as provided at law. It is contemplated that a default condition may arise where the loan payments are delinquent for a predetermined interval. Thus, the vehicle is used as collateral for the loan used to purchase the vehicle.

Additionally, lease arrangements are entered into whereby the lessee makes monthly rental payment, returning the vehicle to the lessor at the end of a predetermined term specified in the lease. Title typically remains with the lessor. It is sometimes specified in the lease that the lessee may at the lessee's option purchase the vehicle when the lease expires. In the event that the lessee defaults in making lease payments, the lessor may confiscate or repossess the vehicle.

Thus, upon a default condition of the loan or lease (these terms may be used interchangeably herein) the lending institution may seek to confiscate the loan collateral, i.e., the vehicle. Thus, the lending institution will authorize repossession personnel to confiscate the vehicle. Such confiscation processes may potentially require extensive resources and result in a time consumptive, expensive endeavor. Typically, the repossession personnel being the confiscation process with nothing more than the vehicle holder's last known billing address. Not only may such address be no longer valid, the vehicle may not be kept or stored at such location. Moreover, the individual responsible for the loan may even be actively avoiding being located and the vehicle being repossessed.

SUMMARY OF THE INVENTION

In accordance with the present invention, there is provided a method of securing collateral for a loan when indicated by a loan status wherein the collateral is a vehicle. The method provides for installing a transmitter within the vehicle. The transmitter is capable of transmitting locational data regarding the vehicle. The loan status is monitored for a default condition. A data link is established from a base terminal to the transmitter of the vehicle upon an occurrence of the default condition in the loan status. Locational data is transmitted from the transmitter of the vehicle to the base terminal via the data link. The location of the vehicle is determined from the locational data transmitted to the base terminal. Finally, the vehicle is confiscated.

Preferably, the data link is established at predetermined intervals and locational data from the transmitter to the base terminal is transmitted via the data link to verify the operation of the transmitter. In addition, the transmitter is capable

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of sensing any physical tampering therewith and a tamper signal is transmitted in response to any sensed tampering via data link. Advantageously, the transmitter may be powered with a rechargeable battery. Furthermore, the method of the present invention may provide for deactivating the vehicle and enabling a vehicle alarm upon the loan status being in a default condition. In other embodiments of the present invention, the transmitter may be a cellular telephone and locational data may be based upon Global Positioning Satellite (GPS) technology.

As such, based on the foregoing, the present invention mitigates the inefficiencies and limitations associated with prior art methods of retrieving vehicular collateral. Advantageously, the method of the present invention facilitates expedient location and confiscation of vehicular collateral. The transmitter allows a lending institution to virtually instantaneously determine the location of a collateralized vehicle upon the loan status being in a default condition. In addition, the method may utilize current GPS technology to determine with a high degree of precision the location of the vehicle. Further still, the method may provide for an alarm within the vehicle to be enabled so as to further facilitate location and confiscation of the vehicle. In comparison, traditional methods of vehicular collateral retrieval typically begin with the lending institution via an agent thereof using only the last documented address for the individual responsible for the loan. Not only may such address be no longer valid, the vehicle may not be kept or stored at such location. Moreover, the individual responsible for the loan may even be actively avoiding being located and the vehicle being repossessed. As such, vehicle confiscation process may potentially be long and costly.

Additionally, the method of the present invention preferably provides for a verification process of operability of the transmitter. As such, the lending institution is able to test the installed transmitter by having the transmitter periodically send signals. Further, the method provides for the transmitter to alert the lending institution if the transmitter is tampered with. Thus, the lending institution has the benefit being confident that there is a high probability of retrieving the vehicle, should such course of action be necessary, by being able both verify the operability of the transmitter and having a tamper alert system in place.

Accordingly, the present invention represents a significant advance in the art.

BRIEF DESCRIPTION OF THE DRAWINGS

These, as well as other features of the present invention, will become more apparent upon reference to the drawings wherein:

FIG. 1 symbolically depicts vehicle retrieval apparatus and system configuration utilized in the preferred embodiment of the present invention; and

FIG. 2 a flow diagram of steps of the method of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings wherein the showings are for purposes of illustrating a preferred embodiment of the present invention only, and not for purposes of limiting the same, FIGS. 1 and 2 illustrate a method of retrieving vehicular collateral in accordance with the present invention.

As a preliminary matter, it is contemplated that a lending institution makes a loan/lease arrangement with a bor-

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rower respecting a vehicle 10. The vehicle 10 is used as collateral for the loan. Whether the vehicle 10 is purchased, leased or rented, it is understood that the party seeking to secure, confiscate, repossess or otherwise seize the vehicle may be a bank, savings and loan, mortgage company, credit union, vehicle dealership, vehicle manufacturer, leasing agent, collection agency, or any other lending/financial institution and agents thereof. It is further understood that the holder or possessor of the vehicle may be the individual responsible for payment of the vehicle loan/lease and may be referred to as the purchaser, debtor, borrower or lessee. For purposes of the present invention, the term vehicle 10 is contemplated to include automobiles, trucks, motor cycles, boats, house boats, airplanes, helicopters, house trailers, mobile homes, recreational vehicles, heavy machinery (such as tractors) and other devices used for transportation.

In accordance with the present invention, there is provided a method of securing vehicular collateral when indicated by a loan status. The loan status may have a paid current condition and a default condition. When the loan status is in a default condition, it is contemplated that the lending institution may be entitled to confiscate or repossess the vehicle 10.

The method provides for installing 28 a transmitter 14 within the vehicle 10. The transmitter 14 is capable of transmitting locational data regarding the vehicle 10. The loan status is monitored 30 for a default condition 32. Upon an occurrence of the default condition 32 in the loan status, a data link is established 34 from a base terminal 20 to the transmitter 14 of the vehicle 10. Locational data is transmitted 42 from the transmitter 14 of the vehicle 10 to the base terminal 20 via the data link. The location of the vehicle 10 is determined 46 from the locational data transmitted to the base terminal 20. Thus, as early as the loan status having entered into a default condition, the general whereabouts of the collateralized vehicle 10 may be known to the lending institution, e.g., the base terminal 20. Finally, the method provides for the vehicle 10 to be confiscated 48, and thus completing the collateral securing process.

In the preferred embodiment of the method of the present invention, a retrieval apparatus 12 is installed 28 in the vehicle 10. The retrieval apparatus 12 is provided with the transmitter 14, a base communication receiver 16 and a controller 18. It is contemplated that the transmitter 14 and base communication receiver 16 may be the same device, i.e., a transceiver. Furthermore, the transmitter 14 and base communication receiver 16 may take the form of a cellular telephone or other communications device. The transmitter 14 and the base communication receiver 16 are capable of respectively transmitting and receiving signals to and from the base terminal 20. Such signals are distinct electromagnetic digital signals which may be RF signal, for example. It is contemplated that the retrieval apparatus 12 need not necessarily be provided with a base communication receiver 16. Thus, the retrieval apparatus 12 may be passive in nature and may periodically or constantly transmit locational signals.

The transmitter 14 and base communication receiver 16 are electrically connected to a controller 18. The controller 18 may be any type of digital processing device, or computer, such as a microprocessor. The use of a microprocessor as the controller 18 provides for versatility in programmability and provides for an apparatus which can be made as small in size as possible. By providing for an apparatus which is as small in size as possible, a more concealed installation of the retrieval apparatus 12 in the vehicle 10 can be achieved.

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In operation, the base terminal 20 may be in electrical communication with a computer network of the lending institution. The computer network contains data respecting the status of the loan. Upon the loan status being in a default condition 32, the base terminal 20 originates and transmits 36 a transmit request signal. The base communication receiver 16 is configured to receive the transmit request signal from the base terminal 20. Thus, a data link is established 34 between the base terminal 20 and retrieval apparatus 12 disposed within the vehicle 10. The base communication receiver 16 receives 38 the transmit request signal and the controller 18 processes the transmit request signal. In response, the controller 18 initiates the transmitter 14 to transmit 42 locational data of the vehicle 10 to the base terminal 20 via the data link.

It is contemplated that the loan status may further have a delinquent condition, wherein the loan is not paid current. The default condition is one where the loan has not been paid current for a predetermined interval. Thus, typically prior to the loan status being in a default condition, the loan status will be in a delinquent condition. Such a delinquent condition may be used to trigger the transmission of a transmit request signal from the base terminal 20 to the retrieval apparatus 12 as discussed above. Thus, the method of the present invention may further include monitoring 30 the status of the loan to for a delinquent condition 50 and subsequently establishing 34 a data link from the base terminal 20 to the transmitter 14 upon an occurrence of the delinquent condition. The locational data received 44 by the base terminal 20 in response to the transmit request signal may be stored for future use. For example, in the event that the retrieval apparatus 12 is later damaged or inoperable and the loan status is in a default condition, the stored locational data may provide a valuable lead for the repossession personnel to locate and confiscate the vehicle 10.

Subsequent to the receipt of the transmit request signal by the base communication receiver 16, the vehicle locational data 40 is derived regarding the vehicle 10. Various methods deriving 40 such data may be utilized. It is contemplated that those methods of configuring a system to derive locational data respecting the location of the vehicle 10 utilizing a transmitter and/or receiver are chosen from those well known to one of ordinary skill in the art. In a very simple embodiment, the transmitted signals from the transmitter 14 themselves provide locational data. In this respect, such signals provide directional data which can be used to locate the emanating source, i.e., the transmitter 14 in the vehicle 10. In such an embodiment, the base terminal 20 may additionally be mobile and directionally receive the transmitted signals. In another embodiment, the base terminal 20 may be in electronic communication with a plurality of mobile base terminals or an array of antennas which are directionally sensitive and thereby facilitating triangulation techniques to locate the vehicle 10.

In the preferred embodiment of the present invention, however, Global Positioning Satellite (GPS) technology is used to derive 40 the locational data. The retrieval apparatus 10 may further be provided with a GPS positioning signal receiver 22. A GPS data link is established from a global positioning satellite (GPS) 24 to the GPS positioning signal receiver 22 upon the receipt of the transmit request signal. A GPS positioning signal is received by the GPS positioning signal receiver 22 via the GPS data link. As one of ordinary skill in the art will appreciate, the locational data is derivable from the GPS positioning signal. Such locational data is then transmitted 42, as described above. It is contemplated that the GPS locational data provides very precise information as

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to the location of the vehicle 10, and therefore facilitates the efficient determination 46 of the location and the confiscation 48 of the vehicle 10.

In addition, the method of the present invention provides for a system operability verification procedure. A data link is established 34 from the base terminal to the transmitter at predetermined intervals prior to any occurrence of a default condition. The base terminal 20 originates and transmits 36 a transmit request signal which is received 38 by the base communication receiver 16. In response, the transmitter 14 of the vehicle 10 transmits 42 locational data back to the base terminal 20. The receipt of such locational data at the base terminal 20 successfully verifies the operation of the retrieval apparatus 12 including the transmitter 14 and the base communications receiver 16 therein. In addition, the received locational data may be stored for future use should reference to such data be desired. In operation, such a verification procedure could be followed monthly, for example. In the event that locational data is not received by the base terminal 20, and therefore a failed verification occurs, the lending institution may follow-up in contacting the borrower, and correct any problems or defects in the retrieval apparatus 12. Thus, such a verification procedure allows to the lending institution to increase its probability that the retrieval apparatus 12 will function as designed to facilitate the securing of the collateralized vehicle 10.

The method of the present invention is preferably provided with a procedure of alerting the lending institution that the retrieval apparatus 12 has been physically tampered with. In this respect, the retrieval apparatus 12 and/or components thereof (e.g., transmitter 14, base communication receiver 16, GPS positioning signal receiver 22, etc.) are configured to be capable of sensing any physical tampering therewith and transmitting a tamper signal in response to any sensed tampering. Thus, the data link is established 34 from the base terminal 20 to the transmitter 14 upon the sensing 54 of any physical tampering with the retrieval apparatus 12. It is contemplated that the method of determining whether the retrieval apparatus 12 has been tampered with is chosen from those well known to one of ordinary skill in the art and may include electrical and electro-mechanical devices. Advantageously, it is contemplated that such a tampering alert procedure increases the probability that the retrieval apparatus 12 will function properly when desired because the lending institution may become aware of any such tampering prior to the loan entering into a default condition and the mere existence of the tampering alert procedure may deter acts of intentional damage to the retrieval apparatus.

While the retrieval apparatus 12 may be solely powered via the electrical system of the vehicle 10, the retrieval apparatus 10 is preferably additionally powered with a rechargeable battery. In such a configuration, the rechargeable battery is electrically connected to a generator/alternator of the vehicle 10 and is recharged during operation of the vehicle 10. Thus, the retrieval apparatus 12 may utilize the rechargeable battery as a back-up or alternate power supply. Advantageously, use of a rechargeable battery mitigates against unwanted and possibly intentional deactivation of the retrieval apparatus 12 where the vehicle battery is disconnected or the vehicle 10 is not in use.

In addition to the base communication receiver 16 being able to receive transmit request signals, a vehicle alarm signal may also be received. In this regard, the vehicle 10 may be provided with an audio and/or visual devices which are in electrical communication with the controller 18. Such devices may be the vehicle's horn, lights, speakers, etc. The method of the present invention provides for the transmitting

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of a vehicle alarm signal from the base terminal 20 to the base communication receiver 16 and receiving the vehicle alarm signal with the base communication receiver 16. The vehicle alarm signal is then communicated to the controller 18 which electrically enables the vehicle alarm. Such an alarm enablement step is contemplated to facilitate the determination of the exact location of the vehicle 10 once vehicle repossession personnel are within personal sensory range of the vehicle alarm system. Thus, while the locational data which is used by vehicle repossession personnel may allow such personnel to be within the generally locality of the vehicle 10, the sounding of the vehicle horn or illumination vehicle headlamps may further facilitate finding the vehicle 10. This is especially the case where the vehicle 10 is hidden or concealed within a garage, for example.

The base communication receiver 16 may be further capable of receiving a deactivation signal from the base terminal 20 and the controller 18 may be in electrical communication with any number of devices which would facilitate deactivation of the vehicle 10, such the vehicle ignition or fuel system. As such, it is contemplated that the base terminal 20 may transmit a deactivation signal to the base communication receiver 16 via the data link. Upon receipt of the deactivation signal with the base communication receiver 16, the controller 18 may process such signal and initiate the deactivation of the vehicle 10. It is contemplated that the method of deactivating the vehicle 10 via the initiation by the controller 18 is chosen from those well known to one of ordinary skill in the art.

Additional modifications and improvements of the present invention may also be apparent to those of ordinary skill in the art. Thus, the particular combination of parts described and illustrated herein is intended to represent only one embodiment of the present invention, and is not intended to serve as limitations of alternative devices within the spirit and scope of the invention.

What is claimed is:

1. A method of securing collateral for a loan when indicated by a loan status wherein the collateral comprises a vehicle, the method comprising the steps of:

- (a) installing a transmitter within the vehicle, the transmitter being capable of transmitting locational data regarding the vehicle;
- (b) monitoring the loan status for a default condition;
- (c) establishing a data link from a base terminal to the transmitter of the vehicle upon an occurrence of the default condition in the loan status;
- (d) transmitting locational data from the transmitter of the vehicle to the base terminal via the data link;
- (e) determining the location of the vehicle from the locational data transmitted to the base terminal; and
- (f) confiscating the vehicle.

2. The method of claim 1 wherein step (a) further comprises the step of:

- (1) installing a base communication receiver within the vehicle, the base communication receiver being capable of receiving a transmit request signal; and
- step (c) further comprises the steps of:

- (1) establishing a data link from a base terminal to the base communication receiver upon an occurrence of the default condition in the loan status; and
- (2) receiving a transmit request signal from the base terminal with the base communication receiver via the data link.

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3. The method of claim 2 wherein step (c) further comprising the steps of:

- (1) establishing the data link from the base terminal to the base communication receiver at predetermined intervals prior to any occurrence of a default condition; and
- (2) transmitting locational data from the transmitter to the base terminal via the data link to verify the operation of the base communication receiver.

4. The method of claim 1 wherein step (c) further comprising the step of:

- (1) establishing the data link from the base terminal to the transmitter at predetermined intervals prior to any occurrence of a default condition; and
- (2) transmitting locational data from the transmitter to the base terminal via the data link to verify the operation of the transmitter.

5. The method of claim 4 wherein step (c) further comprising the step of:

- (3) receiving the locational data at the base terminal and storing the locational data.

6. The method of claim 1 wherein step (b) further comprising the step of:

- (1) monitoring the loan status for a delinquent condition; and

step (c) further comprising the step of:

- (1) establishing a data link from a base terminal to the transmitter of the vehicle upon an occurrence of the delinquent condition in the loan status.

7. The method of claim 1 wherein the transmitter is capable of sensing any physical tampering therewith and transmitting a tamper signal in response to any sensed tampering, step (c) further comprises the step of:

- (1) establishing the data link from the base terminal to the transmitter upon the sensing of any physical tampering with the transmitter.

8. The method of claim 1 wherein step (a) further comprising the step of:

- (1) powering the transmitter with a rechargeable battery.

9. The method of claim 1 wherein the vehicle having an alarm, step (a) further comprises the step of:

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- (1) installing a base communication receiver within the vehicle, the base communication receiver being capable of receiving a vehicle alarm signal; and

step (d) further comprises the step of:

- (1) transmitting a vehicle alarm signal from the base terminal to the base communication receiver via the data link;
- (2) receiving the vehicle alarm signal with the base communication receiver; and
- (3) enabling the vehicle alarm.

10. The method of claim 1 wherein step (a) further comprises the step of:

- (1) installing a base communication receiver within the vehicle, the base communication receiver being capable of receiving a vehicle deactivation signal; and

step (d) further comprises the step of:

- (1) transmitting a deactivation signal from the base terminal to the base communication receiver via the data link;
- (2) receiving the deactivation signal with the base communication receiver; and
- (3) deactivating the vehicle.

11. The method of claim 1 wherein step (a) further comprises the step of:

- (1) installing a GPS positioning signal receiver;

step (c) further comprises the steps of:

- (1) establishing a data link from a global positioning satellite (GPS) to the GPS positioning signal receiver; and

- (2) receiving a GPS positioning signal; and

wherein the transmitted locational data being based upon the received GPS positioning signal.

12. The method of claim 1 wherein the transmitter is a cellular phone.

13. The method of claim 1 wherein the base terminal is mobile.

14. The method of claim 13 wherein step (e) further comprising the step of:

- (1) moving the base terminal to determine the location of the vehicle.

15. The method of claim 1 wherein the installing of the transmitter is effectuated during the vehicle manufacturing process.

* * * * *

EXHIBIT 2



US006249217B1

(12) **United States Patent**
Forbes

(10) **Patent No.:** **US 6,249,217 B1**
(45) **Date of Patent:** ***Jun. 19, 2001**

(54) **METHOD FOR RETRIEVING VEHICULAR COLLATERAL**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **09/430,424**

(22) Filed: **Oct. 29, 1999**

Related U.S. Application Data

(63) Continuation of application No. 09/103,419, filed on Jun. 24, 1998, now Pat. No. 6,025,774.

(51) Int. Cl.⁷ **B60R 25/10**

(52) U.S. Cl. **340/426; 235/384; 340/988; 342/457; 701/213; 705/38**

(58) **Field of Search** **340/426, 988, 340/989, 990, 928; 342/457; 701/207, 208, 213; 180/287; 705/38; 235/379, 380, 384**

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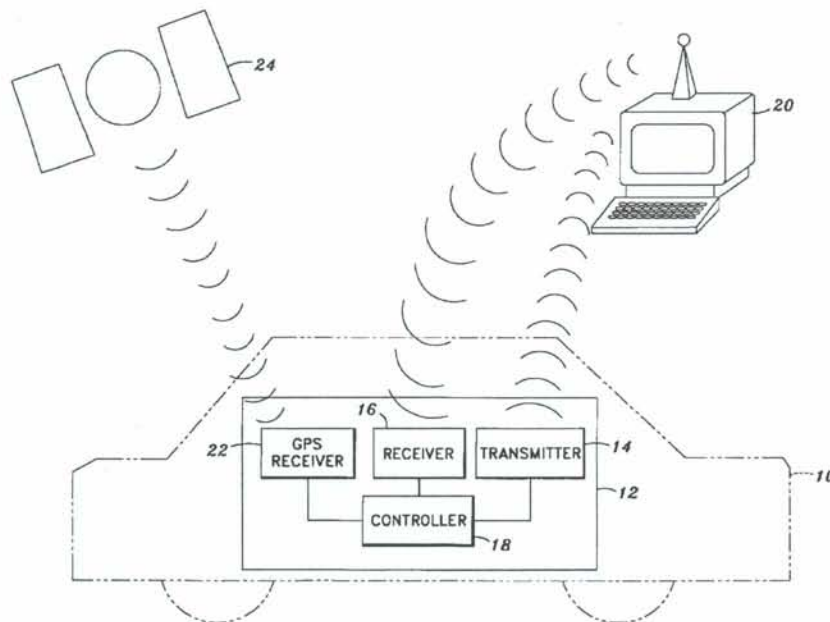
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(57) **ABSTRACT**

In accordance with the present invention, there is provided a method of securing collateral for a loan when indicated by a loan status wherein the collateral is a vehicle. The method provides for installing a transmitter within the vehicle. The transmitter is capable of transmitting locational data regarding the vehicle. The loan status is monitored for a default condition. A data link is established from a base terminal to the transmitter of the vehicle upon an occurrence of the default condition in the loan status. Locational data is transmitted from the transmitter of the vehicle to the base terminal via the data link. The location of the vehicle is determined from the locational data transmitted to the base terminal. Finally, the vehicle is confiscated.

15 Claims, 2 Drawing Sheets

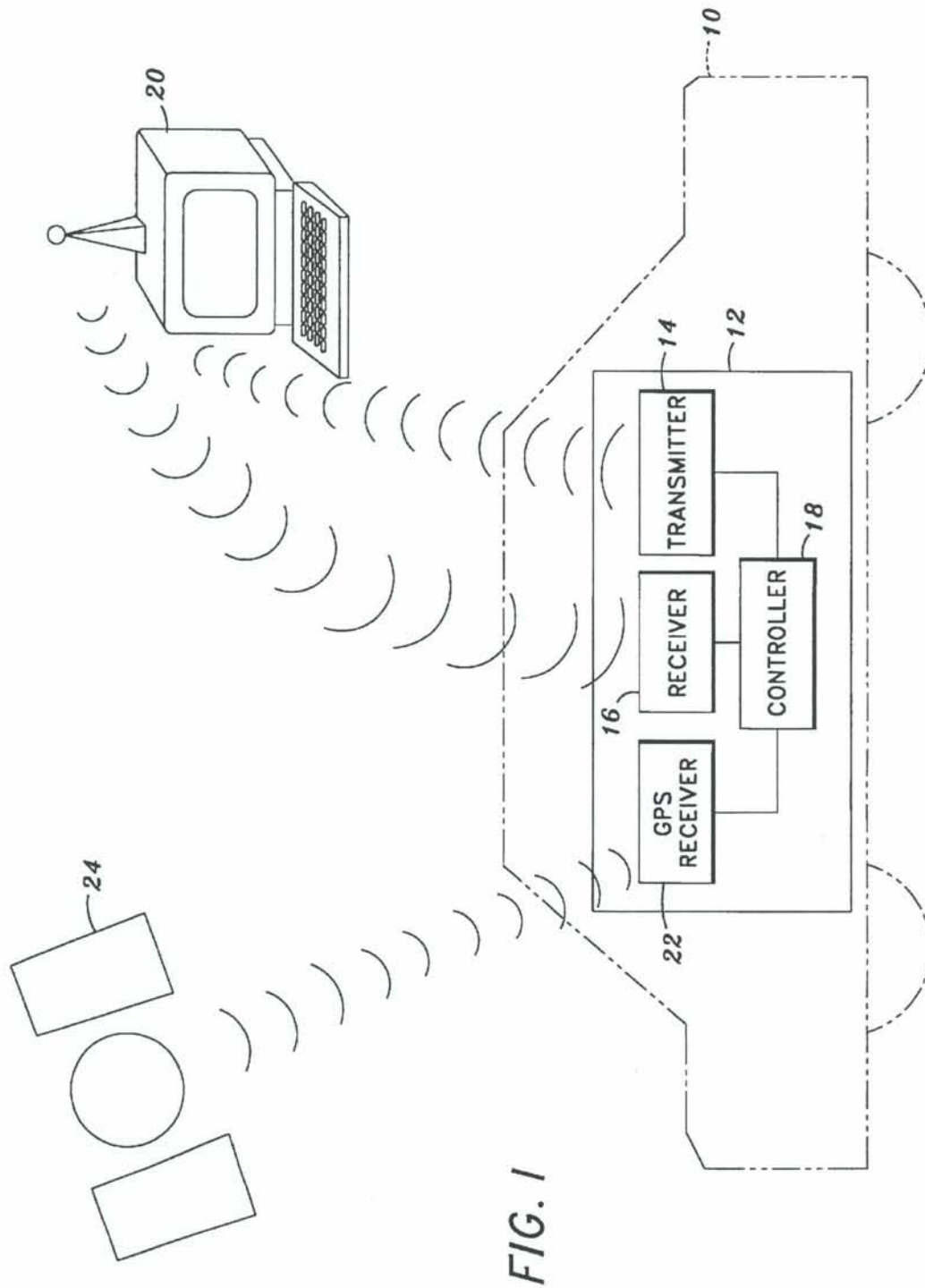


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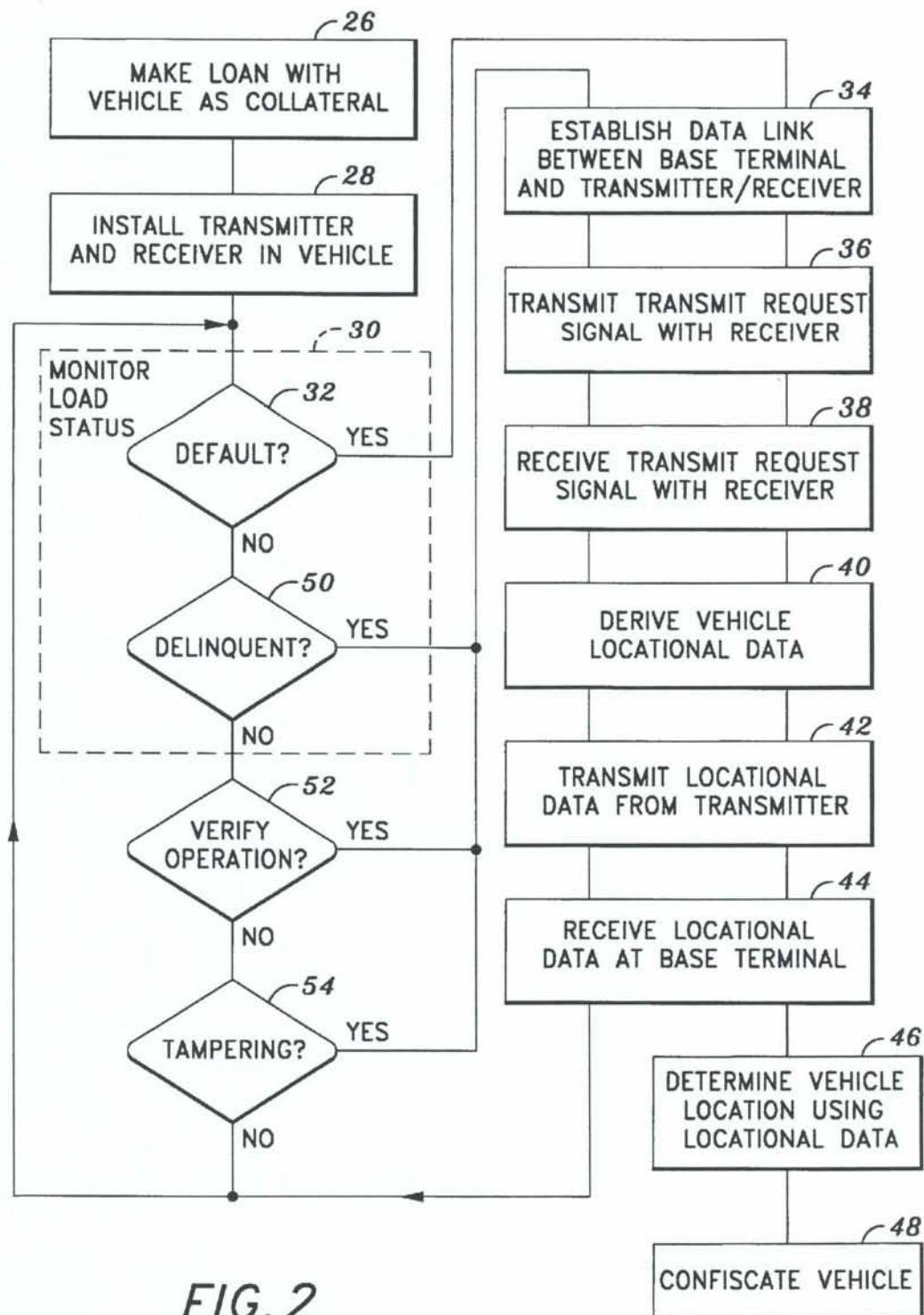


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METHOD FOR RETRIEVING VEHICULAR COLLATERAL

This is a continuation of application Ser. No. 09/103,419 filed Jun. 24, 1998, now U.S. Pat. No. 6,025,774.

FIELD OF THE INVENTION

The present invention relates generally to a method of collateral retrieval, and more particularly to a method of retrieving vehicular collateral in which a transmitter is installed in the vehicle which provides locational data.

BACKGROUND OF THE INVENTION

Generally, vehicles such as automobiles have been financed through a personal loan system, whereby the purchaser borrows money from a financial or lending institution, takes title to the automobile and pays the loan balance in monthly payments which amortize the full amount of the loan. Typically, the financial institution retains a lien interest against the title of the vehicle and the loan is secured by a chattel mortgage thereon. The financial institution may confiscate or repossess the vehicle upon a default condition of the loan, as agreed to by the purchaser or as provided at law. It is contemplated that a default condition may arise where the loan payments are delinquent for a predetermined interval. Thus, the vehicle is used as collateral for the loan used to purchase the vehicle.

Additionally, lease arrangements are entered into whereby the lessee makes monthly rental payment, returning the vehicle to the lessor at the end of a predetermined term specified in the lease. Title typically remains with the lessor. It is sometimes specified in the lease that the lessee may at the lessee's option purchase the vehicle when the lease expires. In the event that the lessee defaults in making lease payments, the lessor may confiscate or repossess the vehicle.

Thus, upon a default condition of the loan or lease (these terms may be used interchangeably herein) the lending institution may seek to confiscate the loan collateral, i.e., the vehicle. Thus, the lending institution will authorize repossession personnel to confiscate the vehicle. Such confiscation processes may potentially require extensive resources and result in a time consumptive, expensive endeavor. Typically, the repossession personnel being the confiscation process with nothing more than the vehicle holder's last known billing address. Not only may such address be no longer valid, the vehicle may not be kept or stored at such location. Moreover, the individual responsible for the loan may even be actively avoiding being located and the vehicle being repossessed.

SUMMARY OF THE INVENTION

In accordance with the present invention, there is provided a method of securing collateral for a loan when indicated by a loan status wherein the collateral is a vehicle. The method provides for installing a transmitter within the vehicle. The transmitter is capable of transmitting locational data regarding the vehicle. The loan status is monitored for a default condition. A data link is established from a base terminal to the transmitter of the vehicle upon an occurrence of the default condition in the loan status. Locational data is transmitted from the transmitter of the vehicle to the base terminal via the data link. The location of the vehicle is determined from the locational data transmitted to the base terminal. Finally, the vehicle is confiscated.

Preferably, the data link is established at predetermined intervals and locational data from the transmitter to the base

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terminal is transmitted via the data link to verify the operation of the transmitter. In addition, the transmitter is capable of sensing any physical tampering therewith and a tamper signal is transmitted in response to any sensed tampering via data link. Advantageously, the transmitter may be powered with a rechargeable battery. Furthermore, the method of the present invention may provide for deactivating the vehicle and enabling a vehicle alarm upon the loan status being in a default condition. In other embodiments of the present invention, the transmitter may be a cellular telephone and locational data may be based upon Global Positioning Satellite (GPS) technology.

As such, based on the foregoing, the present invention mitigates the inefficiencies and limitations associated with prior art methods of retrieving vehicular collateral. Advantageously, the method of the present invention facilitates expedient location and confiscation of vehicular collateral. The transmitter allows a lending institution to virtually instantaneously determine the location of a collateralized vehicle upon the loan status being in a default condition. In addition, the method may utilize current GPS technology to determine with a high degree of precision the location of the vehicle. Further still, the method may provide for an alarm within the vehicle to be enabled so as to further facilitate location and confiscation of the vehicle. In comparison, traditional methods of vehicular collateral retrieval typically begin with the lending institution via an agent thereof using only the last documented address for the individual responsible for the loan. Not only may such address be no longer valid, the vehicle may not be kept or stored at such location. Moreover, the individual responsible for the loan may even be actively avoiding being located and the vehicle being repossessed. As such, vehicle confiscation process may potentially be long and costly.

Additionally, the method of the present invention preferably provides for a verification process of operability of the transmitter. As such, the lending institution is able to test the installed transmitter by having the transmitter periodically send signals. Further, the method provides for the transmitter to alert the lending institution if the transmitter is tampered with. Thus, the lending institution has the benefit being confident that there is a high probability of retrieving the vehicle, should such course of action be necessary, by being able both verify the operability of the transmitter and having a tamper alert system in place.

Accordingly, the present invention represents a significant advance in the art.

BRIEF DESCRIPTION OF THE DRAWINGS

These, as well as other features of the present invention, will become more apparent upon reference to the drawings wherein:

FIG. 1 symbolically depicts vehicle retrieval apparatus and system configuration utilized in the preferred embodiment of the present invention; and

FIG. 2 a flow diagram of steps of the method of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings wherein the showings are for purposes of illustrating a preferred embodiment of the present invention only, and not for purposes of limiting the same, FIGS. 1 and 2 illustrate a method of retrieving vehicular collateral in accordance with the present invention.

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As a preliminary matter, it is contemplated that a lending institution makes 26 a loan/lease arrangement with a borrower respecting a vehicle 10. The vehicle 10 is used as collateral for the loan. Whether the vehicle 10 is purchased, leased or rented, it is understood that the party seeking to secure, confiscate, repossess or otherwise seize the vehicle may be a bank, savings and loan, mortgage company, credit union, vehicle dealership, vehicle manufacturer, leasing agent, collection agency, or any other lending/financial institution and agents thereof. It is further understood that the holder or possessor of the vehicle may be the individual responsible for payment of the vehicle loan/lease and may be referred to as the purchaser, debtor, borrower or lessee. For purposes of the present invention, the term vehicle 10 is contemplated to include automobiles, trucks, motor cycles, boats, house boats, airplanes, helicopters, house trailers, mobile homes, recreational vehicles, heavy machinery (such as tractors) and other devices used for transportation.

In accordance with the present invention, there is provided a method of securing vehicular collateral when indicated by a loan status. The loan status may have a paid current condition and a default condition. When the loan status is in a default condition, it is contemplated that the lending institution may be entitled to confiscate or repossess the vehicle 10.

The method provides for installing 28 a transmitter 14 within the vehicle 10. The transmitter 14 is capable of transmitting locational data regarding the vehicle 10. The loan status is monitored 30 for a default condition 32. Upon an occurrence of the default condition 32 in the loan status, a data link is established 34 from a base terminal 20 to the transmitter 14 of the vehicle 10. Locational data is transmitted 42 from the transmitter 14 of the vehicle 10 to the base terminal 20 via the data link. The location of the vehicle 10 is determined 46 from the locational data transmitted to the base terminal 20. Thus, as early as the loan status having entered into a default condition, the general whereabouts of the collateralized vehicle 10 may be known to the lending institution, e.g., the base terminal 20. Finally, the method provides for the vehicle 10 to be confiscated 48, and thus completing the collateral securing process.

In the preferred embodiment of the method of the present invention, a retrieval apparatus 12 is installed 28 in the vehicle 10. The retrieval apparatus 12 is provided with the transmitter 14, a base communication receiver 16 and a controller 18. It is contemplated that the transmitter 14 and base communication receiver 16 may be the same device, i.e., a transceiver. Furthermore, the transmitter 14 and base communication receiver 16 may take the form of a cellular telephone or other communications device. The transmitter 14 and the base communication receiver 16 are capable of respectively transmitting and receiving signals to and from the base terminal 20. Such signals are distinct electromagnetic digital signals which may be RF signal, for example. It is contemplated that the retrieval apparatus 12 need not necessarily be provided with a base communication receiver 16. Thus, the retrieval apparatus 12 may be passive in nature and may periodically or constantly transmit locational signals.

The transmitter 14 and base communication receiver 16 are electrically connected to a controller 18. The controller 18 may be any type of digital processing device, or computer, such as a microprocessor. The use of a microprocessor as the controller 18 provides for versatility in programmability and provides for an apparatus which can be made as small in size as possible. By providing for an apparatus which is an small in size as possible, a more

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concealed installation of the retrieval apparatus 12 in the vehicle 10 can be achieved.

In operation, the base terminal 20 may be in electrical communication with a computer network of the lending institution. The computer network contains data respecting the status of the loan. Upon the loan status being in a default condition 32, the base terminal 20 originates and transmits 36 a transmit request signal. The base communication receiver 16 is configured to receive the transmit request signal from the base terminal 20. Thus, a data link is established 34 between the base terminal 20 and retrieval apparatus 12 disposed within the vehicle 10. The base communication receiver 16 receives 38 the transmit request signal and the controller 18 processes the transmit request signal. In response, the controller 18 initiates the transmitter 14 to transmit 42 locational data of the vehicle 10 to the base terminal 20 via the data link.

It is contemplated that the loan status may further have a delinquent condition, wherein the loan is not paid current. The default condition is one where the loan has not been paid current for a predetermined interval. Thus, typically prior to the loan status being in a default condition, the loan status will be in a delinquent condition. Such a delinquent condition may be used to trigger the transmission of a transmit request signal from the base terminal 20 to the retrieval apparatus 12 as discussed above. Thus, the method of the present invention may further include monitoring 30 the status of the loan to for a delinquent condition 50 and subsequently establishing 34 a data link from the base terminal 20 to the transmitter 14 upon an occurrence of the delinquent condition. The locational data received 44 by the base terminal 20 in response to the transmit request signal may be stored for future use. For example, in the event that the retrieval apparatus 12 is later damaged or inoperable and the loan status is in a default condition, the stored locational data may provide a valuable lead for the repossession personnel to locate and confiscate the vehicle 10.

Subsequent to the receipt of the transmit request signal by the base communication receiver 16, the vehicle locational data 40 is derived regarding the vehicle 10. Various methods deriving 40 such data may be utilized. It is contemplated that those methods of configuring a system to derive locational data respecting the location of the vehicle 10 utilizing a transmitter and/or receiver are chosen from those well known to one of ordinary skill in the art. In a very simple embodiment, the transmitted signals from the transmitter 14 themselves provide locational data. In this respect, such signals provide directional data which can be used to locate the emanating source, i.e., the transmitter 14 in the vehicle 10. In such an embodiment, the base terminal 20 may additionally be mobile and directionally receive the transmitted signals. In another embodiment, the base terminal 20 may be in electronic communication with a plurality of mobile base terminals or an array of antennas which are directionally sensitive and thereby facilitating triangulation techniques to locate the vehicle 10.

In the preferred embodiment of the present invention, however, Global Positioning Satellite (GPS) technology is used to derive 40 the locational data. The retrieval apparatus 10 may further be provided with a GPS positioning signal receiver 22. A GPS data link is established from a global positioning satellite (GPS) 24 to the GPS positioning signal receiver 22 upon the receipt of the transmit request signal. A GPS positioning signal is received by the GPS positioning signal receiver 22 via the GPS data link. As one of ordinary skill in the art will appreciate, the locational data is derivable from the GPS positioning signal. Such locational data is then

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transmitted 42, as described above. It is contemplated that the GPS locational data provides very precise information as to the location of the vehicle 10, and therefore facilitates the efficient determination 46 of the location and the confiscation 48 of the vehicle 10.

In addition, the method of the present invention provides for a system operability verification procedure. A data link is established 34 from the base terminal to the transmitter at predetermined intervals prior to any occurrence of a default condition. The base terminal 20 originates and transmits 36 a transmit request signal which is received 38 by the base communication receiver 16. In response, the transmitter 14 of the vehicle 10 transmits 42 locational data back to the base terminal 20. The receipt of such locational data at the base terminal 20 successfully verifies the operation of the retrieval apparatus 12 including the transmitter 14 and the base communications receiver 16 therein. In addition, the received locational data may be stored for future use should reference to such data be desired. In operation, such a verification procedure could be followed monthly, for example. In the event that locational data is not received by the base terminal 20, and therefore a failed verification occurs, the lending institution may follow-up in contacting the borrower, and correct any problems or defects in the retrieval apparatus 12. Thus, such a verification procedure allows to the lending institution to increase its probability that the retrieval apparatus 12 will function as designed to facilitate the securing of the collateralized vehicle 10.

The method of the present invention is preferably provided with a procedure of alerting the lending institution that the retrieval apparatus 12 has been physically tampered with. In this respect, the retrieval apparatus 12 and/or components thereof (e.g., transmitter 14, base communication receiver 16, GPS positioning signal receiver 22, etc.) are configured to be capable of sensing any physical tampering therewith and transmitting a tamper signal in response to any sensed tampering. Thus, the data link is established 34 from the base terminal 20 to the transmitter 14 upon the sensing 54 of any physical tampering with the retrieval apparatus 12. It is contemplated that the method of determining whether the retrieval apparatus 12 has been tampered with is chosen from those well known to one of ordinary skill in the art and may include electrical and electromechanical devices. Advantageously, it is contemplated that such a tampering alert procedure increases the probability that the retrieval apparatus 12 will function properly when desired because the lending institution may become aware of any such tampering prior to the loan entering into a default condition and the mere existence of the tampering alert procedure may deter acts of intentional damage to the retrieval apparatus.

While the retrieval apparatus 12 may be solely powered via the electrical system of the vehicle 10, the retrieval apparatus 10 is preferably additionally powered with a rechargeable battery. In such a configuration, the rechargeable battery is electrically connected to a generator/alternator of the vehicle 10 and is recharged during operation of the vehicle 10. Thus, the retrieval apparatus 12 may utilize the rechargeable battery as a back-up or alternate power supply. Advantageously, use of a rechargeable battery mitigates against unwanted and possibly intentional deactivation of the retrieval apparatus 12 where the vehicle battery is disconnected or the vehicle 10 is not in use.

In addition to the base communication receiver 16 being able to receive transmit request signals, a vehicle alarm signal may also be received. In this regard, the vehicle 10 may be provided with an audio and/or visual devices which are in electrical communication with the controller 18. Such

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devices may be the vehicle's horn, lights, speakers, etc. The method of the present invention provides for the transmitting of a vehicle alarm signal from the base terminal 20 to the base communication receiver 16 and receiving the vehicle alarm signal with the base communication receiver 16. The vehicle alarm signal is then communicated to the controller 18 which electrically enables the vehicle alarm. Such an alarm enablement step is contemplated to facilitate the determination of the exact location of the vehicle 10 once vehicle repossession personnel are within personal sensory range of the vehicle alarm system. Thus, while the locational data which is used by vehicle repossession personnel may allow such personnel to be within the generally locality of the vehicle 10, the sounding of the vehicle horn or illumination vehicle headlamps may further facilitate finding the vehicle 10. This is especially the case where the vehicle 10 is hidden or concealed within a garage, for example.

The base communication receiver 16 may be further capable of receiving a deactivation signal from the base terminal 20 and the controller 18 may be in electrical communication with any number of devices which would facilitate deactivation of the vehicle 10, such the vehicle ignition or fuel system. As such, it is contemplated that the base terminal 20 may transmit a deactivation signal to the base communication receiver 16 via the data link. Upon receipt of the deactivation signal with the base communication receiver 16, the controller 18 may process such signal and initiate the deactivation of the vehicle 10. It is contemplated that the method of deactivating the vehicle 10 via the initiation by the controller 18 is chosen from those well known to one of ordinary skill in the art.

Additional modifications and improvements of the present invention may also be apparent to those of ordinary skill in the art. Thus, the particular combination of parts described and illustrated herein is intended to represent only one embodiment of the present invention, and is not intended to serve as limitations of alternative devices within the spirit and scope of the invention.

What is claimed is:

1. A method of securing collateral for a loan when indicated by a loan status, the collateral comprises a vehicle, a transmitter capable of transmitting locational data regarding the vehicle is installed within the vehicle, the method comprising the steps of:

- (a) receiving a signal in response to a change in the loan status;
- (b) establishing a data link from a base terminal to the transmitter upon the receipt of the signal representative of a change in the loan status;
- (c) transmitting locational data from the transmitter to the base terminal via the data link; and
- (d) determining the location of the vehicle from the locational data transmitted to the base terminal for use in confiscating the vehicle.

2. The method of claim 1 wherein the change in the loan status includes the loan entering into a default condition.

3. The method of claim 1 wherein the change in the loan status includes the loan entering into a delinquent condition.

4. The method of claim 1 wherein a base communication receiver capable of receiving a transmit request signal is installed within the vehicle, step (b) further comprises the steps of:

- (1) establishing a data link from a base terminal to the base communication receiver upon the receipt of a signal representative of a default condition in the loan status; and

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(2) receiving a transmit request signal from the base terminal with the base communication receiver via the data link.

5. The method of claim 4 wherein step (b) further comprises the steps of:

(1) establishing the data link from the base terminal to the base communication receiver at predetermined intervals prior to any receipt of a signal in response to a change in the loan status; and

(2) receiving locational data transmitted from the transmitter to the base terminal via the data link to verify the operation of the base communication receiver.

6. The method of claim 1 wherein step (b) further comprises the steps of:

(1) establishing the data link from the base terminal to the transmitter at predetermined intervals prior to any receipt of a signal in response to a change in the loan status; and

(2) receiving locational data transmitted from the transmitter to the base terminal via the data link to verify the operation of the transmitter.

7. The method of claim 6 wherein step (b) further comprises the step of:

(3) storing the locational data.

8. The method of claim 1 wherein the transmitter is capable of sensing physical tampering therewith and transmitting a tamper signal in response to any sensed tampering, step (b) further comprises the step of:

(1) establishing the data link from the base terminal to the transmitter upon the sensing of any physical tampering with the transmitter.

9. The method of claim 1 wherein the vehicle has an alarm, a base communication receiver capable of receiving a vehicle alarm signal is installed within the vehicle, step (d) further comprises the step of:

(1) transmitting a vehicle alarm signal from the base terminal to the base communication receiver via the data link for enabling the vehicle alarm.

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10. The method of claim 1 wherein a base communication receiver capable of receiving a vehicle deactivation signal is installed within the vehicle, step (d) further comprises the step of:

(1) transmitting a deactivation signal from the base terminal to the base communication receiver via the data link for deactivating the vehicle.

11. The method of claim 1 wherein a GPS positioning signal receiver is installed within the vehicle and the transmitted locational data is based upon a received GPS positioning signal.

12. The method of claim 1 wherein the transmitter is a cellular phone.

13. The method of claim 1 wherein the base terminal is mobile.

14. The method of claim 13 wherein step (d) further comprising the step of:

(1) moving the base terminal to determine the location of the vehicle.

15. A method of securing collateral for a loan when indicated by a loan status, the collateral comprises a vehicle, a transmitter capable of transmitting locational data regarding the vehicle is installed within the vehicle, the method comprising the steps of:

(a) receiving a signal in response to a change in the loan status;

(b) establishing a data link from a base terminal to the transmitter upon the receipt of the signal representative of the loan status being in a default condition;

(c) transmitting locational data from the transmitter to the base terminal via the data link; and

(d) determining the location of the vehicle from the locational data transmitted to the base terminal for use in confiscating the vehicle.

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