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(54) **LOCATION DETERMINATION SYSTEM**

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(52) **U.S. Cl.**
CPC *G08G 1/20* (2013.01)

(58) **Field of Classification Search**
None
See application file for complete search history.

(56) **References Cited**

To view the complete listing of prior art documents cited during the proceeding for Reexamination Control Number 90/013,370, please refer to the USPTO's public Patent Application Information Retrieval (PAIR) system under the Display References tab.

Primary Examiner — Minh T Nguyen

(57) **ABSTRACT**

A system for location tracking of mobile platforms, each mobile platform having a tracking unit is described. The system includes a location determination system communicating through a user interface with at least one subscriber; said communication including inputs that include the subscriber identity and the identity of the mobile platform to be located; a communication system communicating with said location determination system for receiving said remote platform identity; and,
a plurality of remote tracking systems communicating with said communication system for determining the location of the remote platform;
The communication system is arranged to determine an appropriate one of the plurality of remote tracking systems and to communicate said remote platform identity, the appropriate remote tracking system receiving said mobile platform identity and returning mobile platform location information, said communication system being arranged to pass said mobile platform location information to said location detention system. The location determination system is arranged to receive said mobile platform location information and to forward it to said subscriber.
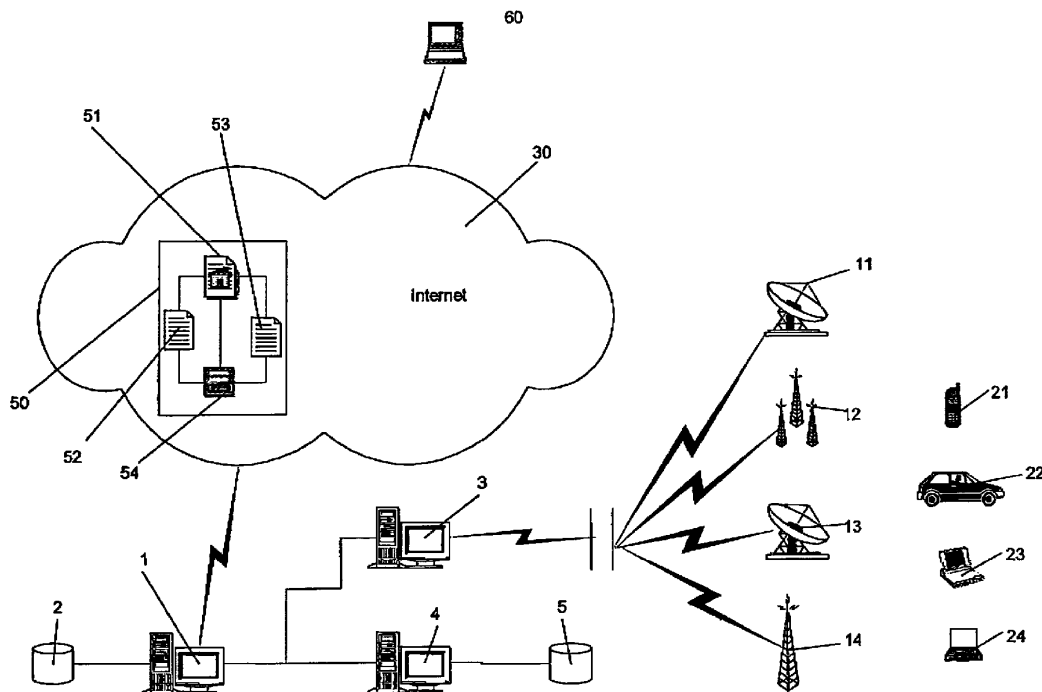
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EX PARTE
REEXAMINATION CERTIFICATE

THE PATENT IS HEREBY AMENDED AS
INDICATED BELOW.

Matter enclosed in heavy brackets [ ] appeared in the patent, but has been deleted and is no longer a part of the patent; matter printed in italics indicates additions made to the patent.

AS A RESULT OF REEXAMINATION, IT HAS BEEN DETERMINED THAT:

The patentability of claims **1-17** and **19** is confirmed.

New claims **20-42** are added and determined to be patentable.

Claim **18** was not reexamined.

20. The system according to claim 1, wherein the property that is predetermined for each mobile platform for determining the location of the mobile platform is the remote tracking system's identifier of the mobile platform to be located.

21. The system according to claim 1, wherein each of the plurality of remote tracking systems includes the tracking unit of a mobile platform.

22. The system according to claim 21, wherein the tracking unit of a mobile platform is physically separated from the remote tracking system.

23. A system for location tracking of mobile platforms, each mobile platform having a tracking unit; the system including:

a location determination system communicating through a user interface with at least one subscriber; said communication including inputs that include the subscriber identity and the identity of the mobile platform to be located;

a communication system communicating with said location determination system for receiving said mobile platform identity; and,

a plurality of remote tracking systems communicating with said communication system each of the remote tracking systems being adapted to determine the location of a respective mobile platform according to a property that is predetermined for each mobile platform for determining the location of the mobile platform;

wherein the property that is predetermined for each mobile platform for determining the location of the mobile platform is the remote tracking system's identifier of the mobile platform to be located;

a user database linked to said location determination system for cross-referencing the mobile platforms to be tracked with the remote tracking systems capable of tracking them;

wherein said location determination system is arranged to determine an appropriate one of the plurality of remote tracking systems, the appropriate remote tracking system receiving said mobile platform identity from said communication system and returning mobile platform location information, said communication system being arranged to pass said mobile platform location information to said location determination system;

said location determination system being arranged to receive said mobile platform location information and to forward it to said subscriber.

24. A system according to claim 23, wherein said location determination system communicates with a mapping system

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having at least one map database, said mapping system accepting mobile platform location information, correlating said location information with a location on a map from said at least one map database, generating a map on which said location is marked and communicating said map to said location determination system, wherein said location determination system is arranged to forward said map to said subscriber.

25. A system according to claim 24, wherein said mapping system communicates with at least one location information system, said location information system accepting mobile platform location information, obtaining location information and returning said location information for association with said map.

26. A system according to claim 25, wherein said location information system obtains location information from selected ones of traffic information systems, electronic Yellow Page databases, video databases, L-commerce systems and free advertising systems.

27. A system according to claim 24, wherein said map database includes maps formatted as at least one of the following: Raster Map in various scales, vector maps and air photo.

28. A system according to claim 24, wherein said user interface accepts multiple mobile platforms to be located, the mapping system accepting multiple mobile platform location information and generating a map on which each location is marked.

29. A system according to claim 24, wherein data forwarded to said subscriber comprises at least one mobile platform location in a map represented in HTML and an image.

30. A system according to claim 23, wherein the communication between said subscriber and said location determination system is over the Internet.

31. A system according to claim 23, wherein the communication between said communication system and the corresponding remote tracking service is over the Internet.

32. A system according to claim 23, wherein said location determination system, said mapping system and said communication system are accommodated in the same web site.

33. A system according to claim 23, wherein said mobile platform is a vehicle.

34. A system according to claim 23, wherein said mobile platform is a person.

35. A system according to claim 23, wherein each remote tracking system belongs to a different company and supervises a different group of mobile platforms.

36. The system according to claim 23, wherein each of the plurality of remote tracking systems includes the tracking unit of a mobile platform.

37. The system according to claim 36, wherein the tracking unit of a mobile platform is physically separated from the remote tracking system.

38. A method of determining the location of mobile platforms, said mobile platforms between them being locatable by a plurality of remote tracking systems, each which is adapted to determine the location of a respective mobile platform according to a property that is predetermined for each mobile platform, the method comprising:

(a) accepting inputs from a subscriber identifying one or more mobile platforms to be located;

(b) cross-referencing the mobile platforms to be tracked with the remote tracking systems capable of tracking them;

(c) determining for each mobile platform an appropriate one of the plurality of remote tracking systems that is capable of locating said mobile platform;

(d) communicating the identity of the one or more mobile platforms to be located to the determined remote tracking system(s);

(e) causing the remote tracking system(s) to determine the location of a respective mobile platform according to the property that is predetermined for each mobile platform; wherein said property that is predetermined for each mobile platform is each remote tracking system's identifier of the mobile platform to be located;

(f) receiving the location of each mobile platform from the respective remote tracking system; and

(g) transmitting the location of each mobile platform to said subscriber.

39. A method according to claim 38, wherein transmitting the location of each mobile platform further comprises correlating the location of each mobile platform with a map database and transmitting a map having marked said mobile platform location(s) to said subscriber.

40. A computer program product comprising a computer useable medium having computer readable program code embodied therein to enable determination of the location of mobile platforms, said mobile platforms between them being locatable by a plurality of remote tracking systems, each which is adapted to determine the location of a respective mobile platform according to a property that is predetermined for each mobile platform, the computer readable program product comprising:

computer readable program code for causing a computer to accept inputs from a subscriber identifying one or more mobile platforms to be located;

computer readable program code for cross-referencing mobile platforms to be tracked with the remote tracking systems capable of tracking them;

computer readable program code for causing the computer to determine for each mobile platform an appropriate one of the plurality of remote tracking systems that is capable of locating said remote platform;

computer readable program code for causing the computer to communicate the identity of the one or more mobile platforms to be located to the determined remote tracking system(s);

computer readable program code for causing the computer to determine the location of a respective mobile platform

according to the property that is predetermined for each mobile platform; wherein said property that is predetermined for each mobile platform is each remote tracking system's identifier of the mobile platform to be located;

computer readable program code for causing the computer to receive the location of each mobile platform from the respective remote tracking system; and

computer readable program code for causing the computer to transmit the location of each mobile platform to said subscriber.

41. A computer program product according to claim 39, further comprising computer readable code for causing the computer to correlate the location of each mobile platform with a map database and to transmit a map having marked said mobile platform location(s) to said subscriber.

42. A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method of determining the location of mobile platforms, said mobile platforms between them being locatable by a plurality of remote tracking systems, each of which is adapted to determine the location of a respective mobile platform according to a property that is predetermined for each mobile platform, the method comprising:

(a) accepting inputs from a subscriber identifying one or more mobile platforms to be located;

(b) cross-referencing mobile platforms to be tracked with the remote tracking systems capable of tracking them;

(c) determining for each mobile platform an appropriate one of the plurality of remote tracking systems that is capable of locating said mobile platform;

(d) communicating the identity of the one or more mobile platforms to be located to the determined remote tracking system(s);

(e) causing the computer to determine the location of a respective mobile platform according to the property that is predetermined for each mobile platform; wherein said property that is predetermined for each mobile platform is each remote tracking system's identifier of the mobile platform to be located;

(f) receiving the location of each mobile platform from the respective remote tracking system; and

(g) transmitting the location of each mobile platform to said subscriber.

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