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**Datasheet for the decision
of 1 June 2017**

Case Number: T 2465/09 - 3.5.01

Application Number: 04814127.9

Publication Number: 1728222

IPC: G06Q10/00, G01S5/00, G01S1/00

Language of the proceedings: EN

Title of invention:
METHOD AND SYSTEM FOR PROVIDING TRACKING SERVICES TO LOCATE AN
ASSET

Applicant:
Spectrum Tracking Systems, Inc.

Headword:
Tracking of assets/SPECTRUM TRACKING SYSTEMS

Relevant legal provisions:
EPC Art. 54, 56

Keyword:
Novelty - (yes) - combination of passages related to different
disclosures not permissible
Inventive step - (no)

Decisions cited:

Catchword:



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Case Number: T 2465/09 - 3.5.01

D E C I S I O N
of Technical Board of Appeal 3.5.01
of 1 June 2017

Appellant: Spectrum Tracking Systems, Inc.
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Representative: Grünecker Patent- und Rechtsanwälte
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Decision under appeal: Decision of the Examining Division of the
European Patent Office posted on 1 July 2009
refusing European patent application No.
04814127.9 pursuant to Article 97(2) EPC.

Composition of the Board:

Chairman W. Chandler
Members: A. Wahrenberg
P. Schmitz

Summary of Facts and Submissions

- I. The appeal is against the decision of the Examining Division to refuse European patent application 04814127.9 on the grounds of lack of novelty (Article 54 EPC) and lack of inventive step (Article 56 EPC) over D1 (US 5 895 436 A).
- II. In the statement setting out the grounds of appeal, the appellant requested that the decision to refuse the application be set aside and that a patent be granted on the basis of the main or first auxiliary request underlying the impugned decision. As a second auxiliary request, the appellant requested oral proceedings.
- III. In a communication pursuant to Rule 110(2) EPC, the Board observed that the subject-matter of claim 1 according to the main and first auxiliary request appeared to lack an inventive step (Article 56 EPC), both with regard to the prior art summarized at the beginning of D1, and with regard to the disclosure of D1 with respect to figure 3C.
- IV. The appellant replied with arguments, and requested that those arguments be taken into account for a further study of the case by the Board.
- V. The Board arranged for oral proceedings to be held. In a communication pursuant to Article 15(1) RPBA accompanying the summons to oral proceedings, the Board made additional observations on the clarity of the claims and support by the description (Article 84 EPC). The Board cited D8 (US 5, 208, 756), which is the prior art summarized in D1.

VI. In reply, the appellant withdrew its request for oral proceedings and requested a decision according to the state of the file.

VII. The Board held oral proceedings in the appellant's absence. After considerations of the appellant's submissions, the Chairman of the Board announced the decision.

VIII. Claim 1 according to the main request reads as follows:

A system for coordinated asset location comprising:

means adapted for receiving location data from a cellular transmitter associated with a selected asset, which location data includes data representative of a cellular receiver with which direct communication with the cellular transmitter is made;

means adapted for communicating received location data to a tracking service system, which tracking service system includes a database representative of geographic locations associated with a plurality of cellular receivers;

means adapted for querying the database with received location data so as to generate geographic tracking data associated with a location of the cellular receiver, the geographic tracking data including display data adapted to generate a map image including data representative of a location of the selected asset; and

means adapted for communicating the geographic tracking data to an associated security agency so as to allow for viewing of an image generated in accordance

with the display data and at least one of tracking and interception of the selected asset.

- IX. The system according to claim 1 of the first auxiliary request differs from the main request in that the "a cellular transmitter associated" in the first-mentioned means is replaced by

a plurality of cellular transmitters each associated

and by the addition of the following means to the system:

means adapted for receiving identification data corresponding to a cellular transmitter associated with an asset;

means adapted for storing history data representative of received location data and geographic tracking data for each of the plurality of cellular transmitters in a central repository of the associated security agency, the history data including data associated with each cellular transmitter from commencement of receiving location data for an asset and extending to recovery of the asset;

means adapted for storing service data associated with a service history corresponding to each tracking device;

means adapted for isolating at least one party of interest relative to each cellular transmitter corresponding to stored history data in accordance with received identification data;

means adapted for prompting each party of interest in accordance with stored history data corresponding thereto;

means adapted for receiving into the associated security agency a request from each party of interest after prompting thereof;

means adapted for retrieving, from the central repository, history data corresponding to each isolated party of interest;

means adapted for selectively communicating history data from the associated security agency to each corresponding party of interest after receipt of a request therefrom; and

means adapted for communicating service data corresponding to each party of interest upon receipt of a request therefrom.

X. During the course of the appeal procedure, the appellant argued that:

It was not permissible, as the Examining Division did, to combine a passage in D1 summarizing the background art with a passage related to a preferred embodiment of the invention in D1 for destroying the novelty of the subject-matter according to claim 1.

In the background art described in D1 (D8), the location of the vehicle was calculated, using triangulation, by the hidden device located in the vehicle. By contrast, the subject-matter of claim 1 did not provide any calculations on the side of the asset to be located, resulting in a simplified structure of

the device.

D8 did not establish "direct communication" with a single cellular receiver; it only made use of signals transmitted from a plurality of cellular receivers, without entering into "direct communication" with them.

D8 had no database for providing the geographic locations of the cellular receivers together with image map data.

The storing of history data in claim 1 according to the auxiliary request had the technical effect of allowing for a later viewing of the tracking session, in particular, after a loss of signal.

The storing and communication of service data, such as the the state of charge of the battery in the tracking device, prevents lost tracking opportunities due to foreseeable or avoidable equipment problems.

Reasons for the Decision

1. *The invention*
- 1.1 The invention concerns the tracking of missing, stolen, or lost items or persons ("assets"), using existing cellular networks. The use of existing communications infrastructure is advantageous, because it does not require access to GPS or a custom radio network of receivers.
- 1.2 The asset to be tracked is equipped with a device comprising a cellular transmitter. The location of the

asset/device is determined based on the location of a cellular receiver (cellular tower) with which the device's transmitter communicates. The location is presented on a map at a security agency.

2. *Main request - interpretation of claim 1*

2.1 The interpretation of claim 1 is somewhat complicated. This is largely due to the definition of the invention as a *system* comprising *means* for performing some functions. An issue has been where those means are located. This question is not easily answered, because the claim does not define how the means form, together with the other entities mentioned in the claim (a "cellular transmitter", "a cellular receiver", a "tracking service system" including a "database" and a "security agency"), a system in the sense of a set of interrelated devices, each having a specific function.

2.2 Another problem is that there is no embodiment in the application corresponding to the claimed system. Figure 7 shows a system, which uses existing cellular infrastructure to track a "device transmitter" (702). There is a "device controller" (706), which receives information about the cell tower or towers to which the device is connected. The device controller determines the location of the cell tower, and plots the determined location on a map (page 19, lines 21 to 29). There is also a "security agency" (715). However, there is no "tracking service system" having a database in figure 7. Indeed, there is no description, at all, of a database for storing the geographic locations of the cellular receivers of the network.

2.3 The system according to claim 1 includes

means adapted for receiving location data from a cellular transmitter associated with a selected asset, which location data includes data representative of a cellular receiver with which direct communication with the cellular transmitter is made.

In the Board's view, this implies that the cellular transmitter transmits data, over the cellular network, to some device comprising means for receiving the data. Therefore, the Board accepts the appellant's argument that this means is not part of the tracking device.

That being said, claim 1 covers that all the means are located in one and the same device. The "tracking service system", comprising a database, and the "security agency" could also be part of this device. Indeed, the "security agency" is not necessarily a technical device or system; it could be a human operator.

2.4 The term "location data" used in claim 1 does not appear to define a location. It appears to be an identifier for identifying the cellular receiver communicating with the transmitter. The geographical location of the cellular receiver is retrieved from the database.

3. *Main request - Novelty and inventive step*

3.1 The Examining Division objected to the novelty of the subject-matter of claim 1, in view of a passage in D1 describing the background art (column 1, lines 50 to 67), and of a passage related to a preferred embodiment of the invention in D1 (column 6, lines 34 to 46). The Board agrees with the appellant that this is not permissible without any indication in D1 that the

features of the background art can be combined with the features of the preferred embodiment. However, as the Examining Division rightly pointed out, the description of the background art in D1 is a disclosure in its own right. The Division considered that the subject-matter of claim 1 lacked novelty also in view of this disclosure.

3.2 The background art section in D1 refers to US 5,208,756. The Board finds it convenient to refer directly to this document, cited as D8 in the Board's second communication.

3.3 D8 describes a system for tracking a vehicle using a cellular telephone network. This is *"a system for coordinated asset location"* in the words of claim 1.

In D8, a small device, hidden in the vehicle, calculates the vehicle's location as a function of the locations of several nearby base stations (column 4, lines 10 to 18; figure 1; figure 6). The device receives signals from the base stations. The signals contain data identifying the base station transmitting the signal (column 3, lines 2 to 5 and lines 42 to 48). Thus, the device in D8 comprises

means adapted for receiving location data representative of a cellular receiver with which direct communication with a cellular transmitter associated with a selected asset is made.

In other words, it is the tracking device in D8 that receives the location data from the base stations. There is no external system, which receives such location data from the cellular transmitter of the

tracking device, as implied by the first "means"-feature in claim 1.

- 3.4 The hidden device in D8 has a ROM for storing, in association with the location data identifying each base station, data providing the geographical location of the base station (column 8, lines 66 to 68). The Board considers this to be a specific example of a database in that the device uses it to look up the geographic location of the transmitting base stations, and determines its own position with respect to those geographic locations. Therefore, the device in D8 has:

a database representative of geographic locations associated with a plurality of cellular receivers; and

means adapted for querying the database with received location data so as to generate geographic tracking data associated with a location of the cellular receiver, the geographic tracking data including data representative of a location of the selected asset.

The subject-matter of claim 1 differs from this in that the database and the means for querying the database are located outside of the tracking device.

- 3.5 The tracking device in D8 sends the vehicle's location, over the cellular telephone network, to a central station (17) operated by an operator (column 4, lines 34 to 43 and lines lines 63 to 68). The central station includes a computer and means for displaying the vehicle's location on a graphical map. Thus, the tracking device in D8 has

means for communicating [geographic tracking data]

to a tracking service system,

and the central station in D8 comprises

means adapted for communicating the geographic tracking data to an associated security agency so as to allow for viewing of an image generated in accordance with display data and at least one of tracking and interception of the selected asset.

In D8, the tracking device sends its own geographic location to an external system. This is different from claim 1, in which the external system receives location data representative of a cellular receiver.

3.6 In the Board's view, the system in D8 performs the same functions as performed by the means of the system according to claim 1. However, as follows from the analysis above, the system in claim 1 differs from D8 in that the determination of the vehicle's geographical location, by querying a database with the location of a cellular receiver, is done by a system external to the tracking device. The invention as defined in claim 1 is, therefore, novel over D8 (Article 54(1) and (2) EPC).

3.7 The appellant argues that the invention according to claim 1 allows for a simplified structure of the tracking device. The Board concurs.

However, the Board considers that it would have been obvious to transfer the determination of the vehicle's location, including the database and database lookup, to the central station in D8, in order to reduce the size and complexity of the tracking device. The central station already stores a map of the geographical area

covered by the cellular telephone network. The skilled person would have certainly considered storing the geographical locations of the receivers there too.

3.8 The appellant argued that, irrespective of the device determining the vehicle's position, the system according to claim 1 differed from D8 in that it used the cell site structure for determining a single cellular receiver "with which direct communication is made". By contrast, D8 did not establish direct communication with a single cellular receiver. It only made use of signals transmitted from a plurality of cellular receivers, without entering into direct communication with them.

3.9 The Board is not persuaded by the appellant's arguments. In the Board's view, direct communication does not exclude communication with multiple receivers. The device in D8 receives signals transmitted directly from a number of base stations and is, therefore, in "direct communication" with them.

Additionally, the claim wording "which location data includes" covers data pertaining to more than one receiver. This reading of claim 1 is in line with the application as published (see page 20, lines 27 to 31), which describes the use of a "narrowed location" calculated based on the relative locations of a plurality of cell towers.

3.10 For these reasons, the Board concludes that the skilled person, starting from D8, would have arrived at the system according to claim 1 according to the main request without inventive effort. Therefore, the subject-matter of claim 1 does not involve an inventive step in the sense of Article 56 EPC.

4. *First auxiliary request - inventive step*
- 4.1 The central station in D8 can display the position of a second vehicle, which is equipped with a device operating in the same manner as the one hidden in the first vehicle (column 10, lines 61 to 67). Thus, D8 discloses the feature *"a plurality of cellular transmitters each associated with a selected asset"* in claim 1 of the first auxiliary request.
- 4.2 The tracking of a plurality of vehicles requires that those vehicles can be identified. Thus, if not implicit in D8, the "identification data" in claim 1 according to the first auxiliary request would have been an obvious addition.
- 4.3 The Board does not see any technical effect arising from the storing and communication of history data and service data in claim 1 according to the first auxiliary request. Indeed, the storing of historical data merely amounts to keeping data that would otherwise have been deleted. The effect of providing a more reliable tracking, argued by the appellant, depends on actions taken in response to the service data. No such actions are defined in claim 1 according to the auxiliary request.
- 4.4 The skilled person would have provided a suitable storage in the form of a "central repository", and means for communicating the data to interesting parties, by prompting, and upon receipt of a request.
- 4.5 For these reasons, the Board judges that the skilled person would have arrived at the subject-matter of claim 1 according to the first auxiliary request.

Therefore, an inventive step is lacking (Article 56 EPC).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



N. Schneider

W. Chandler

Decision electronically authenticated