BESCHWERDEKAMMERN
DES EUROPÄISCHEN
PATENTAMTS

BOARDS OF APPEAL OF
THE EUROPEAN PATENT
OFFICE

CHAMBRES DE RECOURS
DE L'OFFICE EUROPÉEN
DES BREVETS

Internal distribution code:
(A) [-] Publication in OJ
(B) [-] To Chairmen and Members
(C) [-] To Chairmen
(D) [X] No distribution

Datasheet for the decision
of 2 February 2018

Case Number: T 1546/12 - 3.5.01

Application Number: 09171160.6

Publication Number: 2194496

IPC: G06Q10/00, G06Q50/00

Language of the proceedings: EN

Title of invention:
Proxy-based transport reservation and scheduling system

Applicant:
Avaya Inc.

Headword:
Responsive object proxy/ AVAYA

Relevant legal provisions:
EPC Art. 56, 123(2)

Keyword:
Inventive step - deriving missing object position data from
vehicle sensor (no - obvious alternative) - updating a
schedule based on an object's location (no - not technical) -
combination invention (no - merely sequential steps)

Case Number: **T 1546/12 - 3.5.01**

D E C I S I O N
of Technical Board of Appeal 3.5.01
of 2 February 2018

Appellant: (Applicant)	Avaya Inc. 211 Mount Airy Road Basking Ridge New Jersey, DE 07920-2332 (US)
Representative:	Williams, David John Page White & Farrer Bedford House John Street London WC1N 2BF (GB)
Decision under appeal:	Decision of the Examining Division of the European Patent Office posted on 15 February 2012 refusing European patent application No. 09171160.6 pursuant to Article 97(2) EPC.

Composition of the Board:

Chairman	W. Chandler
Members:	A. Wahrenberg
	Y. Podbielski

Summary of Facts and Submissions

I.   The appeal is against the decision of the examining
        division to refuse the European patent application No.
        09171160.6 for lack of inventive step (Article 56 EPC).

        The examining division based its negative finding on
        inventive step on a combination of documents D3 (WO
        2004/062159 A2) and D1 (WO 2005/045718 A1).

II.   The applicant requested that the decision of the
        examining division be set aside and that a patent be
        granted on the basis of the main request, or, in the
        alternative, one of auxiliary requests 1 to 4, all
        filed with the statement setting out the grounds of
        appeal. The claims of the main request are identical to
        the claims underlying the decision under appeal.

III.   Claim 1 of the main request reads:

        A system comprising a vehicle (101) CHARACTERIZED BY:
            a first responsive object (111) capable of
        responding to a first inquiry about the state of the
        first responsive object (111), wherein the first
        inquiry is formatted in accordance with a first
        protocol;
            a first responsive object sensor (131) for sensing
        when the first responsive object (111) is within the
        vehicle (101);
            a proxy (121) for responding to the first inquiry
        about the state of the first responsive object (111)
        with the state of the vehicle (101) when the first
        responsive object (111) is sensed within the vehicle
        (101) by the first responsive object sensor (131); and

a scheduler (151) comprising hardware and software modules for making a reservation based on a response from the proxy (121);

wherein the first responsive (111) object comprises a first sensor that is used by the first responsive (111) object to determine the state of the first responsive object (111);

wherein the vehicle (101) comprises a second sensor (131, 141, 142); and

wherein the proxy (121) intercepts the first inquiry that is directed to the first responsive object (111), when the first responsive object (111) is sensed within the vehicle (101) by the first responsive object sensor (131), and responds to the first inquiry with the state of the vehicle (101) as measured by the second sensor (131, 141, 142).

IV.   Claim 1 of the first auxiliary request differs from the main request by the wording of the last feature. In the first auxiliary request, it reads:

wherein the proxy (121) intercepts the first inquiry that is directed to the <u>first address of the</u> first responsive object (111), when the first responsive object (111) is sensed within the vehicle (101) by the first responsive object sensor (131), and responds to the first inquiry with the state of the vehicle (101) as measured by the second sensor (131, 141, 142).

V.   The second auxiliary request differs from the main request by the addition of the following features at the end of claim 1:

a second responsive object (112) for responding to a second inquiry about the state of the second responsive object (112), wherein the second inquiry is formatted

in accordance with a second protocol;

    wherein the proxy (121) is also for responding to the second inquiry about the state of the second responsive object (112) with the state of the vehicle when the second responsive object is within the vehicle (101); and

    wherein the first protocol is different than the second protocol.

VI.   The third auxiliary request differs from the second auxiliary request by the addition of the following feature at the end of claim 1:

wherein the proxy (121) intercepts the second inquiry that is directed to the second responsive object (112).

VII.   Claim 1 of the fourth auxiliary request recites in full:

An apparatus comprising a vehicle (101) CHARACTERIZED BY:

    a first responsive object (111) configured to respond to a first inquiry at a first address about the state of the first responsive object (111), wherein the first inquiry is formatted in accordance with a first protocol;

    a second responsive object (112) configured to respond to a second inquiry at a second address about the state of the second responsive object (112), wherein the second inquiry is formatted in accordance with a second protocol that is different from the first protocol;

    a first responsive object sensor (131) configured to sense when the first responsive object (111) is within the vehicle (101);

    a proxy (121) configured to respond using the first

*protocol to the first inquiry directed to the first
address about the state of the first responsive object
(111) with the state of the vehicle (101) when the
first responsive object (111) is sensed within the
vehicle (101) by the first responsive object sensor
(131), and is further configured to respond using the
second protocol to the second inquiry directed to the
second address about the state of the second responsive
object (112) with the state of the vehicle when the
second responsive object (112) is sensed within the
vehicle (101); and
    a scheduler (151) comprising hardware and software
modules configured to make a reservation based on a
response from the proxy (121);
wherein the first responsive (111) object comprises a
first sensor that is used by the first responsive (111)
object to determine the state of the first responsive
object (111);
    wherein the vehicle (101) comprises a second sensor
(131, 141, 142);
    wherein the proxy (121) intercepts the first
inquiry that is directed to the first address of the
first responsive object (111), when the first
responsive object (111) is sensed within the vehicle
(101) by the first responsive object sensor (131), and
responds to the first inquiry with the state of the
vehicle (101) as measured by the second sensor (131,
141, 142); and
    wherein the proxy (121) intercepts the second
inquiry that is directed to the second address of the
second responsive object (112), when the second
responsive object (112) is sensed within the vehicle
(101), and responds to the second inquiry with the
state of the vehicle (101) as measured by the second
sensor (131, 141, 142).*

VIII.   The Board issued a summons to oral proceedings
         accompanied by a communication setting out the Board's
         preliminary observations on the case. The Board did not
         see any error in the examining division's finding on
         inventive step.

IX.   In a written reply, the appellant submitted further
         arguments in favour of inventive step.

X.   Oral proceedings were held without the appellant, who
         had announced its absence in advance.

XI.   The appellant's arguments can be summarised as follows:

         Apart from the differences identified by the examining
         division, the claimed invention differed from D3 by the
         proxy intercepting inquiries directed to the responsive
         objects. The group controller in D3 did not intercept
         inquiries, because the inquiries were directed to the
         network address of the group controller rather than
         being directed to the individual addresses of the
         responsive objects.

         The dictionary definition of 'intercept' was to prevent
         something from continuing to a destination, i.e. the
         entity that intercepted was not the destination itself.
         Thus, the term 'intercept' had a special, well-
         understood meaning. It could not be understood as
         simply having a meaning of 'receiving'.

         In contrast to D3, the invention permitted a monitoring
         system and intermediate network components to use the
         same network address to communicate with the responsive
         objects, independent of whether the monitoring system
         directly communicated with the responsive object or
         with the proxy.

The scheduling was not merely an automation of a non-technical task, because it was based on a response from the inventive proxy. By responding with the state of the vehicle, the proxy in claim 1 provided a more accurate location of objects that were unable to respond to inquiries. The more accurately and easily the responsive object's location could be ascertained, the more precisely a scheduler could make reservations for the responsive objects.

Reasons for the Decision

1.   *Background*

1.1   The invention provides a mechanism for monitoring the states of objects located inside a vehicle. In the following, it is assumed that the state of an object is the object's location, which is one of the examples mentioned in the published application (see paragraphs [0005] and [0014]).

        The invention also comprises a scheduler for making reservations based on the objects' locations. For example, if the location indicates that an object might not arrive at its destination on time, alternative arrangements might have to be made.

1.2   The objects are capable of responding to inquiries about their locations. Because of that, the application calls them "responsive objects". Each responsive object comprises a location sensor ("a first sensor"), for detecting the object's location using, for example, GPS.

When a responsive object is located inside a vehicle, its ability to receive and respond to inquiries might be impeded (paragraph [0004]). Moreover, inside the vehicle, the responsive objects might not be able to receive a GPS signal.

1.3   The invention solves this problem by means of a proxy, which is better able than the responsive objects to receive inquiries (paragraph [0005]). The proxy is also better able than the responsive objects to receive location-determining signals by using its own location sensor ("a second sensor"). The proxy compensates for the unavailability of the responsive objects by responding to inquiries on their behalf (paragraph [0016]).

2.   *Main request, claim 1*

Claim 1 of the main request specifies that the proxy intercepts a first inquiry that is directed to a first responsive object, when the first responsive object is sensed to be within the vehicle by a first responsive objects sensor, and responds to the first inquiry with the state of the vehicle as measured by the second sensor.

3.   *Main request, inventive step*

3.1   The examining division started from D3, which is a document concerned with the same problem as the invention in claim 1 of the main request: the monitoring of objects that cannot receive or transmit radio-frequency signals because they are located inside a vehicle (page 3, lines 3 to 9).

3.2   The examining division identified the "group
        controller" (220) in D3 as the "proxy" in claim 1, and
        found that the subject-matter of claim 1 differed from
        D3 by the following features:

            a) the proxy responds with the location of the
        vehicle as measured by a second sensor comprised in the
        vehicle; and

            b) a scheduler comprising hardware and software
        modules for making a reservation based on a response
        from the proxy.

3.3   The Board notes that the examining division's analysis
        of claim 1 did not include the "first responsive object
        sensor for sensing when the first responsive object is
        within the vehicle". However, the appellant did not
        dispute that this feature was disclosed in D3, and the
        Board sees no reason for finding otherwise.

        Indeed, claim 1 of the main request defines the "first
        responsive object sensor" merely by reference to its
        function of detecting whether a responsive object is
        inside the vehicle. The particular configuration of the
        sensor remains undefined. It could be part of the
        responsive object, the proxy, or the vehicle, or simply
        refer to a function of the system as a whole.

        In D3, it is detected whether an object is within
        communication range of the group controller (page 9,
        line 19 to page 10, line 4; page 11, lines 20 to 23).
        Since the purpose of the group controller is to act as
        a proxy on behalf of the objects located in a vehicle,
        it is evident that its communication range covers the
        vehicle. Therefore, the Board considers that the
        detection in D3 corresponds to the function of the

first responsive object sensor in claim 1 of the main
request.

3.4   The appellant argued that, apart from the differences
       a) and b) identified by the examining division, the
       invention as defined in claim 1 of the main request
       differed from D3 in that the proxy *intercepted*
       inquiries directed to the responsive objects. The
       appellant referred to a dictionary definition of the
       word '*intercept*': to prevent something from continuing
       to a destination. In the appellant's view, this
       definition excluded an arrangement as in D3, in which
       inquiries were directed to the network address of the
       group controller rather than to the individual address
       of each responsive object (see page 11, lines 7 to 10).

3.5   The appellant's arguments do not convince the Board.
       General-purpose dictionaries can certainly be a useful
       tool in patent-claim construction. However, the terms
       of a claim must be read through the eyes of the skilled
       person, in the technical context of the whole claimed
       subject-matter and of the application as a whole.

       The application does not define how the proxy is
       configured to receive and respond to inquiries directed
       to the responsive objects. Indeed, there is nothing in
       the application to suggest that all network components
       use one and the same network address to communicate
       with a responsive object, irrespective of whether the
       communication goes via the proxy.

       It is, however, clear from the context of claim 1, and
       of the application as a whole (see for example
       paragraphs [0005] and [0016]), that the proxy does the
       opposite of *preventing* inquiries from reaching the
       responsive object. It *enables* communication, by

responding to inquiries of behalf of the responsive
objects, when the responsive objects themselves are
unable to respond to inquiries.

The group controller in D3 does exactly that. It acts
as a proxy by communicating on behalf of the responsive
objects (page 10, lines 1 to 4; and page 11, lines 2 to
7). Therefore, the Board does not see any distinction
in how the claimed proxy and the group controller in D3
receive inquiries.

3.6   Thus, the Board comes to the same conclusion as the
        examining division that the subject-matter of claim 1
        differs from D3 by features a) and b).

3.7   The examining division argued that features a) and b)
        solved different partial problems:

        The problem solved by feature a) was to find an
        alternative solution to the problem of providing sensor
        information when the responsive object could not use
        its own sensor.

        Feature b), on the other hand, was considered to
        provide an automation of a non-technical scheduling.

3.8   The appellant's arguments seemed to suggest that there
        was a synergy between a) and b): Since a) provided
        improved location information, the reservation based on
        that location information provided by b) was also
        improved.

3.9   The Board is not convinced that a relationship in which
        the output of one process provides the input to another
        process is sufficient to establish a synergy between
        those processes. A synergistic combination requires

functional reciprocity, not just dependency. The features must interact such that the combined effect goes beyond the sum of the individual effects produced by each feature. There is no such interaction between features a) and b). Therefore, they must be assessed separately for inventive step.

3.10   Furthermore, the Board does not see that feature a) provides an improvement over D3.

D3 already solves the problem of providing location information when the responsive objects are inside a vehicle and cannot determine their own location using GPS (see: page 3, lines 4 to 9; and page 15, lines 21 to 22). Then, the group controller provides location information that it already has available (page 22, lines 11 to 13). In other words, D3 uses historic location data as an approximation if the object's current location is not available.

The invention in claim 1 also provides an approximation, that is the location of the vehicle. The Board agrees with the examining division that this is an alternative to the approximation in D3.

3.11   The examining division argued that the skilled person would have turned to D1 to find an alternative to the historic location data in D3. The Board sees no error in this approach. However, the Board considers that the solution of providing the location of the vehicle would have been obvious in view of D3 alone.

As already mentioned by the examining division in the decision, the group controller in D3 has its own GPS sensor, and it stores its own location in memory. The Board is of the view that it would have been

straightforward and obvious to use that information as an approximation of the object's location.

3.12   Concerning feature b), the Board agrees with the examining division that making a reservation based on the object's location is not technical, and as such, it does not contribute to inventive step. The Board furthermore agrees with the examining division that the implementation of the scheduler for making the reservation using hardware and software modules would have been routine for the skilled person.

3.13   For these reasons, the Board concludes that the subject-matter of claim 1 of the main request lacks an inventive step (Article 56 EPC).

4.   *Auxiliary request 1*

4.1   In claim 1 of the first auxiliary request, the proxy intercepts the first inquiry which is directed to the first address of the first responsive object.

        As already mentioned in connection with the main request (see point 3.5 above), the application does not provide any technical details of the proxy. In the Board's view, neither the word 'intercept' nor the expression "inquiries being directed to the responsive objects" in paragraph [0017] of the published application provides a direct and unambiguous basis for using the same network address to communicate with the responsive object and the proxy. Therefore, the first auxiliary request is unallowable for added subject-matter (Article 123(2) EPC).

5.   *Auxiliary request 2*

5.1   Claim 1 of the second auxiliary request refers to a
        "second responsive object" for responding to a second
        inquiry formatted in accordance with "a second
        protocol". The second protocol is different from the
        first protocol used for the first inquiry directed to
        the first responsive object. The proxy responds also to
        the second inquiry about the second responsive object
        when the second responsive object is sensed within the
        vehicle.

5.2   The examining division considered, in connection with
        dependent claim 2 before it, that the second responsive
        object and the proxy being able to handle inquiries
        formatted according to different protocols was
        disclosed in D3. The appellant did not dispute this.
        Instead, the appellant relied on the same arguments as
        already provided in respect of the main request.

        In any case, that the proxy is multilingual in the
        sense that it can communicate with the inquirer using
        the same protocols that are used to communicate with
        the responsive objects is not more than a requirement,
        i.e. a problem to be solved. In view of the requirement
        of supporting multiple responsive objects using
        different protocols, the solution to provide suitable
        means for doing so is obvious.

        Therefore, the Board sees no reason to depart from the
        conclusion of the examining division that the feature
        added by the second auxiliary request does not provide
        an inventive step.

6.   *Third auxiliary request*

        Claim 1 of the third auxiliary request specifies that
        the proxy intercepts the inquiries directed to the
        second responsive objects. As already set out in
        connection with the main request, the Board considers
        that D3 discloses a proxy that intercepts inquiries
        directed to responsive objects. Therefore, the addition
        of this feature does not lead to an inventive step.

7.   *Fourth auxiliary request*

        Claim 1 of the fourth auxiliary request includes the
        feature of the first auxiliary request, which was found
        to relate to subject-matter extending beyond the
        content of the application as filed (Article 123(2)
        EPC). Thus, the fourth auxiliary request contravenes
        Article 123(2) EPC for the same reasons.

Order

For these reasons it is decided that:

        The appeal is dismissed.

The Registrar: The Chairman:

T. Buschek   W. Chandler

Decision electronically authenticated