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Datasheet for the decision of 5 July 2016

Case Number: T 1199/11 - 3.5.04

Application Number: 03717897.7

Publication Number: 1481539

IPC: H04N1/21, G01S5/14

Language of the proceedings: EN

Title of invention:
RECORDING-LOCATION DETERMINATION USING DIFFERENT TYPES OF SIGNAL SOURCES

Applicant:
Intel Corporation

Headword:

Relevant legal provisions:
EPC 1973 Art. 56, 84
EPC Art. 123(2)

Keyword:
Claims - clarity after amendment (yes)
Amendments - added subject-matter (no)
Inventive step - (yes)

Decisions cited:

Catchword:

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Case Number: T 1199/11 - 3.5.04

D E C I S I O N
of Technical Board of Appeal 3.5.04
of 5 July 2016

Appellant: (Applicant)	Intel Corporation 2200 Mission College Boulevard Santa Clara, CA 95054 (US)
Representative:	Dunlop, Hugh Christopher RGC Jenkins & Co. 26 Caxton Street London SW1H 0RJ (GB)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 11 March 2011 refusing European patent application No. 03717897.7 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	B. Müller
Members:	C. Kunzelmann
	M. Paci

Summary of Facts and Submissions

I. The appeal is against the decision of the examining division to refuse European patent application No. 03 717 897.7 under Article 97(2) of the European Patent Convention (EPC).

II. The application was refused on the grounds that claim 1 of the main request then on file did not meet the requirements of Article 123(2) EPC and that the method of claim 1 of the auxiliary request then on file did not involve an inventive step (Article 56 EPC). The following documents were referred to in the decision:

D1: EP 1 133 150 A2,
D2: GB 2 322 248 A,
D3: WO 00/75682 A1,
D4: US 5 936 572 A,
D5: US 2001/0022621 A1, and
D6: US 5 296 884 A.

III. The applicant appealed against this decision and requested that it be set aside. With a letter dated 18 May 2011, which comprised the notice of appeal and the statement of grounds of appeal, the applicant/ appellant filed the claims of a new sole request.

IV. The board issued a communication pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal (RPBA), annexed to a summons to oral proceedings. In this communication, the board raised objections under Article 123(2) EPC and identified a number of issues to be discussed in the context of Articles 84 and 56 EPC 1973.

V. The appellant replied by letter dated 6 June 2016. It also filed three sets of claims according to a main request and first and second auxiliary requests.

VI. Oral proceedings were held before the board on 5 July 2016. During the oral proceedings, the appellant filed claims according to a sole request labelled "Main Request", which replaced the claims of the previous main request. The appellant also withdrew the previous first and second auxiliary requests. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the claims of the sole request filed during the oral proceedings of 5 July 2016. At the end of the oral proceedings, the chairman announced the board's decision.

VII. Claim 1 of the sole request (labelled "Main Request") reads as follows:

"A method for annotating a recording with a location represented by human-intelligible data, the method comprising:
monitoring (204), while travelling, for different types of signal sources, including one or more secondary signal sources, that may be used to facilitate determining a current location;
logging characteristics of said different types of signal sources;
making a recording (206);
determining (208) whether to determine a current location, or to defer current location determination for a later time;
if current location determination is to be deferred, associating the current time with the recording and determining the current location where the recording

occurred, at a later time using said logged characteristics;
if current location determination is not to be deferred, determining if a primary signal source is available (210);
if the primary signal source is available, determining a current location (212) based on position data from the primary signal source and associating (214) the current location with the recording;
if the primary signal source is not available, estimating position data (216) based at least in part on the logged characteristics of the secondary signal sources, determining an estimated current location using the estimated position data, and associating the estimated current location with the recording (218)."

Claims 2 and 3 are dependent on claim 1.

VIII. The reasons for the decision under appeal, as far as relevant to the board's decision, may be summarised as follows:

D6 was considered to represent the closest prior art.

It disclosed a method for annotating a recording with a current location comprising:
monitoring, while travelling, for a signal source (GPS);
identifying a signal source at a first time (reception of GPS signals);
logging the first time and characteristics of the signal source;
making a recording (capturing an image); and
determining a current location (such as a place name) based on the signal source and associating the current location with the recording (column 5, lines 47 to 53).

The subject-matter of claim 1 differed from this by
(a) the additional steps of
determining whether to determine a current location, or to defer current location identification for a later time;
if current location identification was to be deferred, associating the current time with the recording and identifying where the recording occurred at a later time;
and, if current location identification was not to be deferred, proceeding with current location identification; and

(b) the monitoring was performed for different types of signal sources; and
the current location identification comprised:
- determining if a primary signal source was available;
- if the primary signal source was available, determining a current location based on the primary signal source and associating the current location with the recording; and
- if the primary signal source was not available, estimating a current location based at least in part on logged signal source characteristics and associating the estimated current location with the recording.

The features listed under item (a) solved the technical problem of providing more resource-efficient location identification. The features listed under item (b) solved the technical problem of providing a more reliable location identification. These two problems were not related to each other in a way that could generate a synergistic effect between the features under items (a) and (b). No matter if current location identification was deferred or not, in order to

determine the location where a recording was made, signal characteristics (GPS signals, cell tower IDs etc.) which allowed a geographical position to be determined of the place where the recording was made had to be acquired at the time when the recording was made.

The outcome of the determining step of item (a) did not influence the reliability of position determination of item (b). Therefore, the claim contained a juxtaposition of features which had to be considered separately when assessing a potential inventive step of the claimed subject-matter.

As to item (b), it was known to a skilled person that satellite positioning systems such as GPS did not always work, as was the solution of using alternative sources to determine a current position if the primary source (GPS) was not available. This was disclosed for instance in D2, D3 or D4. It would be straightforward for a skilled person, looking for a more reliable method of position determination, to introduce any of the concepts of position determination known from D2, D3 or D4 into the method of determining a current location as used by the system of D6.

As to the features of item (a), they were obvious for a skilled person from a combination of D6 with D5. D5 described a method for annotating a recording (a captured image) with a current location. A camera captured photographs and metadata including capture time and location data. Current location identification was not done in the camera, but deferred, and was performed later on a PC using an album program. A skilled person faced with the problem of resource-efficient location identification, knowing from D5 of

the possibility to perform location identification at a later time, would consider deferring location identification in the method of D6 when resources of the camera were insufficient to perform location identification immediately.

IX. The appellant's arguments may be summarised as follows:

Document D6 could be considered as the closest prior art, as it concerned the same technical field as the present application, namely the annotation of recordings with the location at which the recording had taken place. In the annotation, the location was represented by human-intelligible data such as street names, cities, etc. Documents D2 to D4 concerned a different technical field, namely position determination devices. The examining division had erred in the assessment that a combination of D6 and D5 (and any of D2 to D4) would lead to a method in which the user took a decision to defer (or not to defer) the location determination, and in the case of deferral, the method steps recited in claim 1 where carried out.

This selectability of deferring location determination, and the consequential steps if location determination was deferred, solved the problem of enabling a more efficient use of the available resources. For example, if many recordings were made, or other tasks were carried out in the background, the location determination on the basis of known position data could be deferred, thereby freeing processor power.

Such a deferring option was not taught in any of the available documents. In particular in the photo management system disclosed in D5, the determination of location data was never deferred. In D5, raw GPS data

were position data, and the GPS-derived data (see paragraphs [0003] and [0004]) were human-intelligible location data. In all the embodiments of D5 the location data were generated when a photo was taken. Only the act of associating the location data with the photos was deferred.

Thus even a combination of D6 with D5 would not result in the method of claim 1, and neither would a further combination with D2, D3 or D4. Hence the claimed method involved an inventive step.

Reasons for the Decision

1. The appeal is admissible.

2. *Amendments (Article 123(2) EPC)*

2.1 The objection under Article 123(2) EPC raised in the decision under appeal concerned a feature ("based on the availability of a first signal source representing a radionavigational signal") which is no longer present in claim 1.

2.2 The objection raised in the board's communication concerned a feature of a current location estimation based on a log of the primary signal source, i.e. logged GPS characteristics. This feature is no longer present in claim 1 either.

2.3 The method of claim 1 is essentially based on original claim 1 and figure 2 and the corresponding description. There are undisputed errors in this figure and in the description as well as inconsistencies between the two. However, the board finds that a person skilled in the

art would have recognised these errors and inconsistencies using only common general knowledge. The present amended claim 1 reflects the teaching that a person skilled in the art would derive directly and unambiguously from original claim 1 and figure 2 and the corresponding description. Dependent claims 2 and 3 correspond to original dependent claims 5 and 6.

2.4 In view of the above, the board finds that the present claims meet the requirements of Article 123(2) EPC.

3. *Clarity (Article 84 EPC 1973)*

3.1 Present claim 1 clearly sets out that the claimed method comprises steps of monitoring, while travelling, for different types of signal sources and logging (at least some of) their characteristics, and making a recording. Against this background, a determination is made whether to determine a current location, or to defer current location determination. The claim clearly distinguishes between position data and location data, and specifies that the deferral concerns location determination. Moreover, it also makes clear that the "current location" is the location at which the recording occurred. It also broadly, but nevertheless clearly, specifies the method steps taken if the location determination is deferred. Likewise, the claim broadly but clearly specifies what further method steps are taken if the location determination is not deferred. In particular, in the latter case, different further steps are taken depending on whether the primary signal source is available or not. Claim 1 is also supported by the description, in particular the description of figure 2. Dependent claims and a claim concerning an article of manufacture, the clarity of

which was discussed in the oral proceedings before the board, have been removed.

3.2 In view of the above, the board finds that the present claims meet the requirements of Article 84 EPC 1973.

4. *Novelty, inventive step (Articles 54 and 56 EPC 1973)*

4.1 It is undisputed that the method of claim 1 is new over both D6 and D5, which relate to the same technical field as the present application, i.e. methods for annotating a recording (such as a photo) with a location (often called "geotagging"). The same is true for D1. Documents D2, D3 and D4 relate to a different technical field and thus do not anticipate the claimed method either.

4.2 The board agrees with the finding in the decision under appeal and the appellant that D6 may be considered as the closest prior art.

4.3 D6 does not disclose at least the feature "determining whether to determine a current location, or to defer current location determination for a later time". Indeed, according to D6 "the camera automatically detects the place where a phototaking operation is carried out and records the data in accordance with the detection" (column 2, lines 20 to 27, and column 5, lines 24 to 30). Location data (called place data in D6) are recorded "according to the operation of a shutter release button" (see column 3, line 63, to column 4, line 9, column 5, lines 47 to 53, and column 6, lines 12 to 21).

4.4 In view of this feature, the board accepts the appellant's formulation of the objective technical

problem, i.e. the enabling of a more efficient use of the available resources. Indeed, determination of a current location represented by human-intelligible data often requires processor- and resource-intensive activities such as looking up maps or databases. These resources may not be available during travel, or be available only in an inefficient manner (such as via a mobile phone connection). Deferring location determination may then be more efficient, since the resources may be more easily accessible after travel is completed.

4.4.1 For the purpose of the board's decision, any further objective technical problem (see the discussion of items (a) and (b) in the decision under appeal) need not be discussed.

4.5 There is disagreement whether this distinguishing feature "determining whether to determine a current location, or to defer current location determination for a later time" is disclosed in the other document relating to the same technical field as the present application, document D5. The factual basis of this disagreement is that in D5 (see figure 4 and the corresponding description) both "location data provided with the photo" (see D5, paragraph [0049]) and "semantic location" data (see paragraph [0053]) are mentioned, both being associated with the same photo. D5 does not explicitly indicate whether the semantic location may already be generated when the photo is taken or only later, using a PC. But in the board's view the latter option (referred to in point 3.2.7 of the decision under appeal) is implicit from the context of the "album program" discussed in paragraphs [0036] to [0042]. D5 (see paragraph [0035]) also explicitly discloses "a photo system in which the digital camera 3

provided with location determining means (such as a GPS receiver) is used to generate digital photos 4, each photo (also referred to as 'image data') 4 being stamped, with location data indicating where the photo was taken". Thus the particular disputed issue is essentially which of the different data discussed in D5 represent a "location" as specified in present claim 1.

4.6 However, it is not necessary for the board to decide this particular issue because the question of inventive step does not hinge on it. The reason is that, even if one accepts the understanding in the decision under appeal that the "semantic location" data in D5 represent the "location" specified in claim 1, and that their determination may be deferred for a later time, after the recording is made, the consequential steps according to the teaching of D5 differ substantially from those given in present claim 1.

4.6.1 According to D5, in all the embodiments the photo has associated with it location/position data (such as GPS data), see paragraphs [0035], [0098] to [0104] and [0108] to [0110]. (The album program may also accept photos without location data, but then the user would add such location data manually, see paragraph [0077]. In the context of D5, this might for instance occur if a camera is used which does not receive or produce any location/position data, or if the relevant location determination service is unavailable).

4.6.2 Thus a person skilled in the art deferring the location determination in the context of one of the embodiments of D5 would use the available (e.g. GPS) data associated with the photo to determine the location. He would also associate the current time with the photo,

but would not determine the current location where the photo was taken, at a later time using the logged characteristics of the different types of signal sources. First, it would not be reasonable to discard the GPS data already associated with the photo, and secondly, there are no logged characteristics of different types of signal sources to determine where the photo was taken. (There is an indication in paragraph [0098] that location services other than GPS may be used, but they would constitute an alternative to GPS, not a fallback option in case GPS becomes unavailable.)

4.6.3 In this context the board notes that in D5 the GPS position/location data are not a characteristic of a signal source but instead relate to the GPS receiver, since in D5 the receiver position is stored ("LOCATION COORD." in figure 4). There is no indication in D5 that raw GPS signals (which include information about the source) might be stored and the calculation of the receiver position from the raw GPS signals might be deferred.

4.6.4 Moreover, a person skilled in the art not deferring the location determination would use the available GPS data and use the album program to determine the location. He would not determine if a primary source (typically GPS) was available, since GPS unavailability would already have caused the embodiments of D5 to become dysfunctional and would have prevented the person skilled in the art from applying the teaching of D5 (as far as a position/location determination when the photo is being taken is concerned) in the first place. D5 does not comprise any teaching concerning the situation of GPS signal (or, more generally, primary signal source) unavailability other than the manual

association of location data with photos mentioned in point 4.6.1 above.

4.6.5 The above considerations also apply if documents D2 to D4 are taken into consideration. The teaching of these documents relevant to the present case may be summarised as switching to a secondary position determination method if the primary position determination method is unavailable or otherwise unsuitable. In the context of a combination of D6 and D5 with any of D2 to D4, such a switching would be performed before the application of the teaching of D5 to the method of D6. In particular, one would first determine which of the position determination methods is available or suitable and then associate location/ position data with the photo using the method of D5. This determination would not be dependent on whether current location determination is not to be deferred.

4.7 In the light of the above, the board finds that, in view of the available state of the art, a person skilled in the art would not have arrived in an obvious manner at the method of present, amended claim 1.

5. The board does not see any other obstacle to the grant of a patent on the basis of present claims 1 to 3.

6. *Remittal (Article 111(1) EPC)*

6.1 In view of the amendments made during the oral proceedings before the board and the particularities of the description of the present application, the board considers it appropriate to remit the case to the department of first instance for the adaptation of the description.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance with the order to grant a patent with the following claims and a description to be adapted thereto:

   Claims 1 to 3 filed during the oral proceedings of 5 July 2016.

The Registrar: The Chairman:

K. Boelicke B. Müller

Decision electronically authenticated