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**Datasheet for the decision
of 2 February 2022**

Case Number: T 2520/19 - 3.4.02

Application Number: 14867705.7

Publication Number: 3074723

IPC: G01C9/00, H04W4/02, H04W4/021

Language of the proceedings: EN

Title of invention:
A GEO-FENCE SYSTEM

Applicant:
eBay, Inc.

Headword:

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

Keyword:
Inventive step - (yes)
Amendments - added subject-matter (no)

Decisions cited:

Catchword:



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Case Number: T 2520/19 - 3.4.02

D E C I S I O N
of Technical Board of Appeal 3.4.02
of 2 February 2022

Appellant: eBay, Inc.
(Applicant) 2025 Hamilton Avenue
San Jose, CA 95125 (US)

Representative: Creation IP Ltd
Hillington Park Innovation Centre
1 Ainslie Road
Glasgow G52 4RU (GB)

Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 17 April 2019
refusing European patent application No.
14867705.7 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman R. Bekkering
Members: H. von Gronau
B. Müller

Summary of Facts and Submissions

I. The applicant's appeal is directed against the decision of the examining division to refuse European patent application No. 14867705.7. The examining division refused the application on the grounds that the subject-matter of claim 1 of the then main request extended beyond the content of the application as originally filed, and it did not involve an inventive step. The subject-matter of claim 1 of the then auxiliary request extended beyond the content of the application as filed, and it did not involve an inventive step.

II. The following document is relevant to the present decision:

D4: US 2012/172027 A1

III. With the grounds of appeal the appellant filed amended claims as a sole request. It requested that the decision of the examining division be set aside and that a patent be granted on the basis of claims 1 to 8 of the sole request filed with the grounds of appeal.

As a precaution oral proceedings were requested.

IV. In a communication pursuant to Article 15(1) RPBA 2020 annexed to summons to oral proceedings the board expressed its provisional opinion, that, inter alia, the claims of the sole request could have been filed in the first-instance proceedings and that it intended not to admit the claims filed with the grounds of appeal because they were not clear and thus *prima facie* not allowable. The board also gave indications as to the

deficiencies to be remedied for a request to be prima facie allowable and then probably be admitted to the proceedings.

- V. With a letter dated 13 December 2021 the appellant filed as a sole request an amended set of claims replacing the claims of the sole request on file and an amended description to replace the amended description then on file. The amendments made to the claims were a direct response to the board's communication. The appellant expressed its hope that the need for oral proceedings could be avoided by the filing of the amendments made to the claims and the description with which the application complied with the requirements of the EPC.
- VI. Thereupon, the board cancelled the summons to oral proceedings.
- VII. The independent claims as filed with letter dated 13 December 2021 read as follows:

"1. A mobile device (104-1 - 104-N) for use with an apparatus (108-1 - 108-N, 200) for generating a plurality of geo-fences to provide a notification to the mobile device (104-1 - 104-N) when the mobile device (104-1 - 104-N) enters or resides in an area encompassed by a geo-fence, the apparatus (108-1 - 108-N, 200) being configured to obtain a trigger generated in response to a change in a geo-fence criteria, and to define one or more boundaries of each geo-fence based on the geo-fence criteria in response to obtaining the trigger;
the mobile device (104-1 - 104-N) being configured to: process the plurality of geo-fences differently based on a number of applications that actively utilize geo-

fences on the mobile device (104-1 - 104-N) to prevent the mobile device (104-1 - 104-N) from being overloaded with notifications for geo-fences, wherein, when the mobile device (104-1 - 104-N) is executing a large number of applications that are actively utilizing geo-fences and crosses a boundary of a geo-fence, the mobile device (104-1 - 104-N) is configured to delay recognition of the geo-fence until the mobile device (104-1 - 104-N) is closer to a center of an area defined by the geo-fence so that the recognized geo-fence encompasses a smaller area than the geo-fence when the mobile device (104-1 - 104-N) is executing a small number of applications that actively utilize geo-fences."

"5. A method performed by a mobile device (104-1 - 104-N) for use with an apparatus (108-1 - 108-N, 200) for generating a plurality of geo-fences, the apparatus (108-1 - 108-N, 200) being configured to obtain a trigger generated in response to a change in the geo-fence criteria, and to define one or more boundaries of each geo-fence based on the geo-fence criteria in response to obtaining the trigger, the method comprising:
processing the plurality of geo-fences differently based on a number of applications that actively utilize geo-fences on the mobile device (104-1 - 104-N) to prevent the mobile device (104-1 - 104-N) from being overloaded with notifications for geo-fences, wherein when the mobile device (104-1 - 104-N) executes a large number of applications that are actively utilizing geo-fences and crosses a boundary of a geo-fence, the mobile device (104-1 - 104-N) delays recognition of the geo-fence until the mobile device (104-1 - 104-N) is closer to a center of an area defined by the geo-fence so that the recognized geo-fence encompasses a smaller

area than the geo-fence when the mobile device (104-1 - 104-N) is executing a small number of applications that actively utilize geo-fences."

"8. A computer-readable medium carrying instructions that, when executed by a processor of a mobile device (104-1 - 104-N), cause the mobile device (104-1 - 104-N) to carry out the method of any one of claims 5 to 7."

Reasons for the Decision

1. The appeal is admissible.
2. Claim 1 - amendments (Article 123(2) EPC)
 - 2.1 Claim 1 of the sole request filed with letter dated 13 December 2021 comprises a combination of features from the description, paragraph 00031, with features of claim 1 of the originally filed international application as published.
 - 2.2 The expressions "smaller" and "larger" objected to by the examining division have been replaced by the originally disclosed expressions "small" and "large" in the definition "when the mobile device (104-1 - 104-N) is executing a large number of applications that are actively utilizing geo-fences and crosses a boundary of a geo-fence, the mobile device (104-1 - 104-N) is configured to delay recognition of the geo-fence until the mobile device (104-1 - 104-N) is closer to a center of an area defined by the geo-fence so that the recognized geo-fence encompasses a smaller area than the geo-fence when the mobile device (104-1 - 104-N) is

executing a small number of applications that actively utilize geo-fences".

2.3 The board therefore comes to the conclusion that claim 1 meets the requirements of Article 123(2) EPC.

3. Claim 1 - clarity (Article 84 EPC)

3.1 According to the application the geo-fences and the geo-fence boundaries are defined by the one or more apparatus 108. Claim 1 filed with the grounds of appeal defined that the mobile device was configured to alter the boundaries of the geo-fences that were recognized by the mobile device. This wording gave the impression that the mobile device altered the geo-fences and thus introduced a lack of clarity. In present claim 1 the unclear portion has been deleted. Claim 1 now clearly defines how the mobile device treats geo-fence boundaries depending of the number of applications actively utilizing geo-fences.

3.2 The board is therefore satisfied that claim 1 meets the requirements of Article 84 EPC.

4. Claim 1 - novelty and inventive step (Articles 54(1) and 56 EPC)

4.1 None of the documents cited by the examining division discloses all the features of claim 1 in combination.

4.2 The examining division was of the opinion that the subject-matter of then claim 1 of the main request did not involve an inventive step in view of document D4 (see decision underlying the appeal, section 3.2).

4.3 The board agrees with the examining division that document D4 can be considered to be the closest prior art document. Document D4 discloses a mobile device 102 for use with an apparatus 114 for generating a plurality of geo-fences to provide a notification to the mobile device when the mobile device enters or resides in an area encompassed by a geo-fence (see Figure 1; paragraphs 0019, 0020), the apparatus 114 being configured to obtain a trigger generated in response to a change in a geo-fence criterion, and to define one or more boundaries of each geo-fence based on the geo-fence criteria in response to obtaining the trigger (see paragraphs 0021 and 0022: the geo-fence is defined on criteria); the mobile device (102) being configured to process the plurality of geo-fences.

4.4 The board agrees with the examining division and the appellant that the claimed invention differs from the disclosure of document D4 in that the mobile device is configured to process the plurality of geo-fences differently based on a number of applications that actively utilize geo-fences on the mobile device to prevent the mobile device from being overloaded with notifications for geo-fences, wherein, when the mobile device is executing a large number of applications that are actively utilizing geo-fences and crosses a boundary of a geo-fence, the mobile device is configured to delay recognition of the geo-fence until the mobile device is closer to a center of an area defined by the geo-fence so that the recognized geo-fence encompasses a smaller area than the geo-fence when the mobile device is executing a small number of applications that actively utilize geo-fences.

- 4.5 These differing features provide the effect of preventing the mobile device from being overloaded with notifications (see published application, paragraph 0031).
- 4.6 The board agrees with the examining division that the objective technical problem to be solved by the invention is therefore preventing the mobile device from being overloaded with notifications.
- 4.7 The examining division was of the opinion that the claim did not define any kind of geographical relationship between the geo-fences that were monitored by the mobile device, which implied that said geo-fences were, in most of the cases, distributed in such a way that the mobile device did not receive a plurality of notifications when it crossed a boundary of one of the geo-fences. As a result, the technical effect of preventing the mobile device from being overloaded with notifications was not achieved in the majority of the cases that were covered by the claim. The solution proposed in claim 1 of the present application therefore could not be considered to involve an inventive step (see contested decision, section 3.2, last two paragraphs).
- 4.8 The appellant argued that the local processing effect on the mobile device brought about the technical effect of dynamically changing the effective geo-fence boundary solely for that mobile device. In this way, a single geo-fence generated by a geo-fence system centrally could have a diverse effect on the geo-fence processing by a plurality of mobile devices. When a mobile device was already actively utilizing a plurality of geo-fences, overloading of the processing of notifications by the mobile device could be

ameliorated by delaying recognition of a geo-fence to effectively reduce its area. The effect was provided also for non-overlapping areas of geo-fences when the mobile device was moving fast. By delaying recognition of a geo-fence, an overload of processing of notifications could be avoided by providing a greater time period between notifications. For overlapping, partially overlapping and separate geo-fences, the technical problem of notification overload could be experienced by the mobile device when moving relative to the geo-fences. There was thus a credible technical effect for a number of configurations of geo-fences and mobile devices that fell within the scope of the claimed invention.

- 4.9 The board shares the opinion of the appellant. The claimed mobile device with its particular treatment of geo-fences in case it is executing a large number of applications that actively utilise geo-fences reduces the load for the mobile device effectively and prevents overload. This characteristic of the mobile device is a permanent characteristic of the device even if this characteristic becomes evident only in certain overload circumstances. The board is therefore of the opinion that the claimed subject-matter represents a technical invention that involves technical means to solve the technical problem. The claimed subject-matter is not suggested by document D4 or any other prior art document cited by the examining division.
- 4.10 The board therefore concludes that the subject-matter of claim 1 is new and involves an inventive step.

5. Independent claim 5 defines a corresponding method performed by a mobile device to prevent the mobile device from being overloaded and therefore likewise meets the requirements of the EPC.
6. Claims 2 to 4 and 6 and 7 are dependent on claim 1 and 5 respectively and therefore likewise meet the inventive step requirements.
7. Claim 8 defines a computer-readable medium carrying instructions that, when executed by a processor of a mobile device, causes the mobile device to carry out the method of any one of claims 5 to 7, and therefore also meets the requirements of the EPC.
8. The description has been adapted to the amended claims and indicates the relevant prior art, in particular document D4 (Rule 42(1)(b) and (c) EPC).
9. The board is therefore satisfied that the application documents according to the sole request meet the requirements of the EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the examining division with the order to grant a patent in the following version:

Description:

Pages 1 to 21 filed with the letter of 13 December 2021

Claims:

No. 1 to 8 filed with the letter of 13 December 2021

Drawings:

Sheets 1/6 to 6/6 of the published International Application.

The Registrar:

The Chairman:



L. Gabor

R. Bekkering

Decision electronically authenticated