

Summary of Facts and Submissions

I. European patent application No. 13 879 060.5 having the title "METHOD AND DEVICE FOR DETERMINING MAIL PATH INFORMATION" was filed on 18-04-2013. It claims priority of CN 201310092641 filed on 21-03-2013. The applicant is

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II. The European search opinion cited the documents

D1 US 2010/230328 A1 (BONNELL CLAYTON [US] ET AL) 16 September 2010
(2010-09-16)

and raised objections under Articles 52(1) and 56 EPC against the subject-matter of the claims.

III. In the response received on 12-04-2017 the applicant provided arguments in support of the patentability of the claims.

IV. In a communication under Article 94(3) EPC issued by the examining division on 09-08-2017, objections under Articles 52(1) and 56 EPC were raised against the subject-matter of the claims. Reference was made to the following documents:

D2 JP 2007 314335 A (OSAWA UNSO KK) 6 December 2007 (2007-12-06)

D3 ZHENG, YANWU: "The Study of Dynamic Route Planning Based on Hierarchical and Partitioned A-star Algorithm",
CHINESE MASTER'S THESES FULL-TEXT DATABASES, 31 December 2011
(2011-12-31), pages 31-48, XP008181251,

D4 CN 102 708 475 A (SOUTHEAST UNIVERSITY) 3 October 2012 (2012-10-03)

D5 EP 2 299 417 A1 (INTER-UNIVERSITY RESEARCH INSTITUTE CORPORATION
RESEARCH ORGANIZATION) 23 March 2011 (2011-03-23)

D6 NL 1 025 704 C2 (PTT POST HOLDINGS BV [NL]) 13 September 2005 (2005-09-13)

D7 WO 2011/056295 A1 (UNITED PARCEL SERVICE INC [US]) 12 May 2011
(2011-05-12)

V. In the response received on 09-11-2017 the applicant requested further examination based on an amended set of claims and provided arguments in support of the patentability of the claims. As an auxiliary measure, he requested oral proceedings.

VI. On 02-03-2018 the examining division issued a summons to attend oral proceedings on 10-09-2018. In the annex to the summons, objections under Articles 52(1), 56 and 84 EPC were raised against the subject-matter of the claims. Reference was made to the following documents:

D8 Anonymous: "Geocoding - Wikipedia",
, 28 December 2012 (2012-12-28), XP055451108,
Retrieved from the Internet:
URL:<https://en.wikipedia.org/w/index.php?title=Geocoding&oldid=530166116>
[retrieved on 2018-02-14]

D9 Anonymous: "Geographic information system - Wikipedia, the free encyclopedia",
, 14 January 2013 (2013-01-14), pages 1-19, XP055215957,
Retrieved from the Internet:
URL:https://en.wikipedia.org/w/index.php?title=Geographic_information_system&oldid=533053721
[retrieved on 2015-09-24]

D10 US 2008/308470 A1 (GIRNUS MALTE [DE] ET AL) 18 December 2008 (2008-12-18)

VII. In a response to the summons received on 08-06-2018 the applicant submitted an amended set of claims, and provided arguments in support of the patentability of the claims.

VIII. With a brief communication dated 03-08-2018, the examining division confirmed that the oral proceedings were maintained and communicated to the applicant the preliminary opinion of the examining division that the subject-matter of the claims did not comply with the requirements of Articles 52(1), 56 and 84 EPC.

IX. In the response received on 20-08-2018 the applicant requested further examination based on an amended set of claims and provided arguments in support of the patentability of these claims.

X. On a telephone conversation held on 04.09.2018, the first examiner communicated to the applicant the preliminary opinion of the examining division that the subject-matter of the latest claims complied with Article 84 EPC, but it did not comply with the requirements of Article 52(1) and 56 EPC.

XI. With a letter received on 05-09-2018, the applicant informed the examining division that nobody would attend the oral proceedings and withdrew his request for oral proceedings.

XII. With a fax sent on 07-09-2018, the applicant was notified that the oral proceedings were cancelled.

XIII. With a brief communication dated 12-09-2018, the applicant was given a detailed preliminary opinion of the examining division concerning the reasons why the subject-matter of the latest claims did not comply with the requirement of inventive step.

XIV. The decision is based on the following claims:

Description, Pages

1-33 as published

Claims, Numbers

1-8 filed in electronic form on 20-08-2018

Drawings, Sheets

1/8-8/8 as published

The claims under consideration are attached to this decision. As to the other application documents, reference is made to the file.

Reasons for the decision

1. Inventive step (Articles 52(1) and 56 EPC)

1.1. The subject-matter of independent claim 1 defines a method for determining mail path information, wherein latitude-longitude coordinates of a sending point and a destination point are acquired and an algorithm is performed to determine the halfway collector-distributor points between the sending point and the destination point. Said method comprises technical and non-technical aspects. When a claim comprises a mixture of technical and non-technical aspects, it is appropriate an examination of the technical character of the claim in order to determine those features which are relevant for the assessment of inventive step.

1.2. The following underlying business (administrative) method can be identified in claim 1 (the crossed out features not being part of the business method):

A method for determining mail path information, comprising the steps of:

determining, ~~by a geographic information system, GIS, map,~~ a latitude-longitude coordinate range of each collector-distributor point in advance based on a collection and distribution range of the collector-distributor point,

and storing, ~~by a computer system,~~ [by an entity] the latitude-longitude coordinate range of each collector-distributor point, wherein each collector-distributor point is configured with collector-distributor point information in advance, the collector-distributor point information of the collector-distributor point records the level of the collector-distributor point and collector-distributor points, each with a higher level, to which the collector-distributor point is subordinate;

acquiring, ~~by a positioning device of GPS, GLONASS, GALILEO or BDS,~~ a latitude-longitude coordinate of a sending point of a piece of mail, providing the acquired the latitude-longitude coordinate of the sending point to the [entity] ~~computer system~~ and determining, based on the latitude-longitude coordinate range to which the latitude-longitude coordinate of the sending point belongs, a collector-distributor point to which the sending point of the piece of mail is subordinate;

and acquiring, ~~by another positioning device of GPS, GLONASS, GALILEO or BDS,~~ a latitude-longitude coordinate of a destination point of the piece of mail,

sending by the [consignee] ~~using the] another positioning device of GPS, GLONASS, GALILEO or BDS,~~ the latitude-longitude coordinate of the destination point of the piece of mail to the sending point,

providing the latitude-longitude coordinate of the destination point to the [entity] ~~computer system~~, and determining, based on a latitude-longitude coordinate range to which the latitude-longitude coordinate of the destination point belongs, a collector-distributor point to which the destination point of the piece of mail is subordinate;

acquiring collector-distributor point information of the collector-distributor point to which the sending point is subordinate and collector-distributor point information of the collector-distributor point to which the destination point is subordinate, wherein the collector-distributor point information of the collector-distributor point to which the sending point is subordinate records the level of the collector-distributor point to which the sending point is subordinate and collector-distributor points in each level which are superordinate to the collector-distributor point to which the sending point is subordinate, and the collector-distributor point information of the collector-distributor point to which the destination point is subordinate records the level of the collector-distributor point to which the destination point is subordinate and collector-distributor points in each level which are superordinate to the collector-distributor point to which the destination point is subordinate; determining, based on the collector-distributor point information of the collector-distributor point to which the sending point is subordinate and the collector-distributor point information of the collector-distributor point to which the destination point is subordinate, each halfway collector-distributor point that the piece of mail needs to reach and path information of the piece of mail;

configuring an identifier corresponding to the path information of the piece of mail;

and attaching a [carrier] ~~bar code, an electronic tag, or a RFID~~ recording the identifier to the piece of mail.

e.g. an entity can be a person or an office

1.3. If the above method was considered on its own it would constitute subject-matter in the sense of Article 52(2) and (3) EPC and would therefore not be patentable. The above method defines a mere business and administrative activity, namely a method for determining/planning in advance the path of a piece of mail between a sending point and a destination point.

It has to be noted that the steps described in point 1.2 above can be performed without use of technical means, e.g. a consignee can acquire a latitude-longitude coordinate (according to e.g. pre-fixed tables/lists with coordinate-addresses) and passes these pieces of information to an entity (which can be another consignee or a central office) which determines a path that a mail should follow according to certain administrative rules and passes an identifier of that path to the first consignee who writes the identifier on a carrier (e.g. label) on the piece of mail. These steps are part of an administrative procedure.

The feature of generally acquiring a sending point and a destination point in the sense of obtaining data defining the sending point and the destination point is considered to be non-technical. The decision of which geographic format (either addresses or geo codes) is used for the algorithm used in the determination of the mail path and for the inputs of such algorithm lies in the administrative domain.

Furthermore, the method described in point 1.2 does not solve any technical problem, but a business (administrative) problem i.e. determining a mail path that a mail piece should follow between a sending point and a destination point according to certain administrative rules and ensuring that the mail piece follows that path. This is not considered to be a technical problem to be solved, the algorithm describing how the path is determined is based on administrative considerations, and is designed by a business person (a mail post officer) who decides that the mail should follow a path passing by halfway collector-distribution points determined using certain administrative rules based on subordinate/superordinate collector-distribution points.

Since the features described in point 1.2 above neither achieve a technical effect nor solve a technical problem, they do not contribute to a technical character of the claim. It is common practice in the European Patent Office, that features which do not contribute, either independently or in combination with other features, to the technical character of the claim are not relevant for assessing inventive step (see Guidelines for Examination in the European Patent Office, G-VII, 5.4.1 first paragraph and 5.2 second paragraph).

1.4. The technical character of claim 1 resides in the technical implementation of the business (administrative) method described in point 1.2 in the following technical system:

- a computer system
- the use of positioning devices of GPS, GLONASS, GALILEO or BDS for acquiring latitude/longitude coordinates.
- a piece of mail
- the use of geographic information system, GIS, map to determine latitude/longitude coordinates
- the use of a bar code, an electronic tag, or a RFID for attaching a carrier to a piece of mail

1.5. The starting point in the sense of the closest prior art is thus regarded to be the technical system described in point 1.4 above. This system was well-known before the priority date of the present application. For example, D7 (figs. 1-3, page 9 line 23 - page 10 line 25, page 7 lines 21-29, page 11 lines 1-2 (handheld with a GPS module),

page 17 lines 1-18 and page 18, line 6, page 12, lines 17-18, and D7, page 22 lines 21-22 (RFID tag affixed to a parcel)) illustrates that such a system was known in the art before the priority date of the present application.

It has to be noted that the use of a geographic information system (GIS) map to determine latitude-longitude coordinates was well-known before the priority date of the present application (see e.g. D7 page 12, lines 17-18 or D1 paragraph 181 and D6 "cartographic projections" in last paragraph of page 10, D8 first paragraph, and "address geocoding" section in D9). It has also to be noted that attaching an identifier to a piece of mail in the form of a bar code, and electronic tag, or a RFID was also very well-known before the priority date of the present application (see e.g. D7, page 22 lines 21-22 or D10 paragraph 125).

1.6. The subject-matter of independent claim 1 differs over the closest prior art through the aspects of the business (administrative) method (as described in point 1.2) being executed by means of the technical system described in point 1.4.

1.7. Where aspects of a claim define an aim to be achieved in a non-technical field, like in the present case, this aim may legitimately appear in the formulation of the objective technical problem in the form of a "requirements specification" provided to the person skilled in the art as a constraint that has to be met (see Guidelines G-VII, point 5.4.1 first and second paragraphs). Accordingly, the skilled person (a computer programmer) is provided with a requirements specification corresponding to the non-technical aspects described in point 1.2. to be implemented or automated in the technical system described in point 1.4.

1.8. For the person skilled in the art, the implementation or automation of said business requirements specification in the technical system described in point 1.4 follows in a straight forward manner. There is no hint in the originally filed application that such a technical implementation implies technical difficulties which have to be solved in an inventive manner. The person skilled in the art, aware that the latitude longitude coordinates have to be acquired for the sending point and the destination point because this is given in the business/administrative method, and aware that positioning devices (e.g. GPS) provide latitude/longitude coordinates, would consider to use a positioning device to acquire the coordinates in the sending point and another positioning device for acquiring the coordinates in the destination point (used by the consignee) in a straightforward manner without applying any inventive skills. Furthermore, the person skilled in the art, aware that a carrier with the identifier of the

mail piece shall be attached to the mail piece (given in the requirement specification or in the business/administrative method), and aware that RFID tags are conventionally attached to mail pieces to identify them, would apply a RFID tag with the identifier to mail piece without applying any inventive skill.

1.9. It is also noted that neither the claim nor the application as a whole describe any technical interaction between the features constituting the non-technical administrative method (see point 1.2) and the technical features (as presented in section 1.4) which would go beyond the mere automation of the business (administrative) related aspects. The examining division cannot derive any technical effect which may be achieved by the distinguishing features beyond the mere automation of a non-technical administrative method.

1.10. In conclusion, the subject-matter of claim 1 lacks inventive step (Articles 52(1) and 56 EPC). The same applies mutatis mutandis to the subject-matter of independent claim 5.

1.11. The subject-matter of the dependent claims 2-4, 6-8 merely defines further aspects of the business (administrative) method initially described in point 1.2 above or commonplace technical features.

In particular:

Re. Claims 2, 6: They define further features of the algorithm to determine the mail path. These are considered as non-technical features.

Re. Claims 4, 8: The use of geographic information system (GIS) map to determine latitude-longitude coordinates was well-known before the priority date of the present application. See e.g. D7 page 12, lines 17-18 or D1 paragraph 181 and D6 "cartographic projections" in last paragraph of page 10, D8 first paragraph, and "address geocoding" section in D9.

Re. Claims 3, 7: They disclose the administrative procedure of sorting the piece of mail based on the determined mail path;

Therefore, the subject-matter of the dependent claims does not comply with the requirement of Article 52(1) within the meaning of Article 56 EPC.

2. Applicant's arguments

Applicant's letter dated 20-08-2018

2.1. The applicant argued that the technical effect achieved by the subject-matter of claim 1 is that the collector-distributor points in the mail path can be efficiently determined when the address information is obscure or old, and therefore the efficiency of mail transmission is improved.

In reply to this, the destination point must be given by the sender in an address format, and therefore the use of this address format brings inaccuracies to the determination of the mail path. The applicant referred to paragraph 48 and stated that in this paragraph the destination point is given in coordinates. However, in paragraph 48 of the description it is stated that (a) the destination point is given as an address and converted to coordinates using GIS map or (b) a positioning device must be used by the recipient at the destination point to obtain the destination point coordinates. In case (b) the destination point must be given also in an address format, because otherwise no positioning device would be needed, the localisation of a recipient using an address format can generate inaccuracies in the system, and also it introduces inefficiencies because a recipient must be successfully localised and must have in his possession a positioning device at the destination point. This is definitely not an efficient method of determining a mail path, because the coordinates of the destination point cannot be efficiently determined. Therefore it cannot be acknowledged that the use of coordinates is more efficient in the present case.

2.2. The applicant argued that the destination point is given in coordinates.

In reply to this, if that were the case, a second positioning device to determine the coordinates of the destination point would not be necessary. Usually the user gives the destination point in an address format, and then in the claimed system a (destination) consignee (a recipient) is localised, contacted and then the destination consignee uses the positioning device at the destination point to obtain the coordinates, this is explained in paragraph 48 of the application. At that point of time, the system uses the coordinates, however at the beginning of the procedure there could be inaccuracies in determining and localising the (destination) consignee from an address format.

2.3. The applicant argued that as long as the satellite positioning device is taken to the destination point, even only for once, the coordinates are acquired in real time and stored at the destinations side for application.

In reply to this, if the coordinates are acquired once and stored for later retrieval, when a destination coordinate will be needed subsequently in the system, the retrieval of the coordinates would not be in real-time anymore, and also not accurate, because the same destination address could correspond to different coordinates, because e.g. the name of the street could have changed.

The acquisition of coordinates by a satellite positioning device is always accurate, but the method used in the application to determine a mail path is not completely accurate, since the destination point is given initially in an address format and the procedure of determining and localising a (destination) consignee using such address can bring inaccuracies to the system.

2.4. The applicant argued that the destination consignee usually receives the mail in routine places, like office or home, and therefore the method is effective because the consignee does not have to travel to the destination point.

In reply to this, a localisation of the destination consignee (the recipient) has to be performed before sending the mail, and the recipient must use a positioning device at the destination to communicate the coordinates to the sending point. However the recipient may be on holiday and he/she cannot be present at the destination point. This method cannot be considered to be effective.

2.5. The applicant argued that the closest prior art does not disclose at least the step "acquiring, by another positioning device of GPS, GLONASS, GALILEO or BDS, a latitude-longitude coordinate of a destination point of the piece of mail, sending, by the another positioning device of GPS, GLONASS, GALILEO or BDS, the latitude-longitude coordinate of the destination point of the piece of mail to the sending point', and other steps mentioned in the last written submission.

In reply to this, the closest prior art comprises the use of a satellite positioning device for acquiring longitude latitude coordinates. That another satellite positioning device is used at the destination point is not explicitly included in the closest prior art, however, another positioning device can be added to the system in an obvious manner if the administrative method requires that the coordinates at the destination point must be acquired by the destination consignee without applying any inventive step. Moreover, adding a new positioning device in this particular case does not achieve any technical effect, because this idea of obtaining the coordinates of the destination point at the destination point is not technically efficient, as stated before. Moreover, the "another positioning device" does not actually send the coordinate of the destination point to the sending point, but according to the paragraph 48 of the description, it is actually the consignee who sends the coordinate to the sending point, not the positioning device.

Applicant's letter dated 08-06-2018

2.6. The applicant argued that the steps listed in point 1.2 above cannot be performed alone without technical means. Specifically, when the steps are performed by a person or an office, such entity is not able to acquire timely updated geographical coordinate information of the sending point and the destination point in mail path, especially by using pre-fixed table or lists with coordinate address. Hence, the collector-distributor points in a mail path cannot efficiently be determined when using the obscure or old address information. The applicant also argued that addresses and geocodes can vary due to different reasons.

In reply to this, the sender specifies a destination point using an address format, the only way to acquire the "updated" coordinates is that the obscure destination address is identified (leading to inaccuracies) and that a consignee is successfully located having in his possession a gps device. This is definitely an inefficient method to determine a mail path.

Moreover, it has to be noted that geo-codes refer to latitude/longitude coordinates and they do not vary in time.

2.7. The applicant argued that there is a technical interaction beyond a mere automation of business related aspects.

In reply to this, as stated above, no technical effect can be acknowledged, and therefore, the steps listed in 1.2. above are considered to be a mere administrative method for determining a mail path.

2.8. The applicant provided some arguments with respect to D1, D3, D6 and D7, however it has to be noted that none of these documents are considered to be the closest prior art. The closest prior art is considered to be the system described in point 1.4 above.

3. Decision

The present application is refused under Article 97(2) EPC.
