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**Datasheet for the decision
of 19 September 2022**

Case Number: T 2570/19 - 3.5.06

Application Number: 16305988.4

Publication Number: 3276530

IPC: G06K9/00, G06K9/78, B07C7/00,
G06K9/22

Language of the proceedings: EN

Title of invention:

ASSISTED MANUAL MAIL SORTING SYSTEM AND METHOD

Applicant:

Quadiant Technologies France

Headword:

Assisted mail sorting/QUADIANT

Relevant legal provisions:

EPC Art. 56
RPBA 2020 Art. 13(2)

Keyword:

Inventive step - (no)
Amendment after summons - exceptional circumstances (yes)

Decisions cited:

T 1294/16, T 0339/19

Catchword:



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Case Number: T 2570/19 - 3.5.06

D E C I S I O N
of Technical Board of Appeal 3.5.06
of 19 September 2022

Appellant: Quadiant Technologies France
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Representative: Cabinet Beau de Loménie
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 8 April 2019
refusing European patent application No.
16305988.4 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman M. Müller
Members: T. Alecu
B. Müller

Summary of Facts and Submissions

I. The appeal is against the decision of the Examining Division to refuse the application. With the grounds of appeal, the appellant 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 of one of three auxiliary requests, the main request being the same as the one underlying the decision.

II. The main request was refused for lack of clarity (Article 84 EPC) and lack of novelty (independent claim) or inventive step (some dependent claims; Articles 52(1), 54 and 56 EPC). In a section entitled "O[]biter dictum", the Examining Division also made further remarks regarding lack of compliance with Articles 84 (clarity) and 123(2) EPC. The Examining Division cited, *inter alia*, the documents

D1: US 2015/110343 A1 and

D3: KNAPP AG: "KNAPP AG - KiSoft Vision", 7 December 2011, XP054976499, Retrieved from the Internet:

URL:<https://www.youtube.com/watch?v=BWY8uFltelM> (video)

As regards the video D3, the Board referred to the version retrieved at the search stage and cited in the European search report, which the EPO had stored at the time and made available to the Board.

III. Together with a summons to oral proceedings, the Board informed the appellant of its preliminary opinion that all requests were new, but lacked inventive step starting from D1. The Board also stated that the

further remarks of the Examining Division would be discussed if necessary.

- IV. Before the oral proceedings, with a letter dated 8 August 2022, the appellant filed two new sets of claims according to third and fourth auxiliary requests, thereby replacing the previous third auxiliary request.
- V. Claim 1 of the second auxiliary request, which was the one discussed with the appellant during the oral proceedings (see reasons below) defines an:

Assisted manual mail sorting system for assisting an operator in manual sortation of mailpieces (30) in a sorting station (10) including a plurality of destination bins (100 - 109), the system having a sorting application for determining a corresponding relevant destination bin and comprising a headset wearable by the operator and connected to a computer (18) comprising an image analysis software for extracting from an image of one of the mailpieces, a name, an address or other relevant parameter required by the sorting application, characterized in that the headset comprises:

- a high resolution camera (16B) for capturing the image of the mailpiece,*
- a transparent display (16A) for signalling to the operator the relevant destination bin where the mailpiece is to be placed by highlighting the destination bin or projecting a visual artefact (36) on the transparent display, at a position corresponding to the destination bin in the view of the sorting station while the operator is looking at the sorting station through the transparent display.*

Reasons for the Decision

Admittance

1. The third and fourth auxiliary requests were filed in response to the summons of the Board. They correspond to the first and second auxiliary request, with dependent claims 5 and 14 omitted, which the Examining Division, in its further remarks, had stated to lack clarity. As the deletion of these claims has no negative impact on procedural economy, the Board decides to admit them under Article 13(2) RPBA 2020 (T 1294/16, reasons 18; T 339/19 reasons 1.3).

The application

2. The application relates to (see page 4, line 15, to page 5, line 10) an augmented reality (AR) system that can be used to assist an operator in manual mail sorting. The operator uses a wearable device (headset) comprising a camera and a display. The camera captures an image of the post item (letter, parcel), the system recognizes the destination address and indicates to the operator the destination bin where the item should be placed. This indication may be done by highlighting the destination bin, or may take the form of a visual artefact overlaid on a view of the sorting station.

Inventive step

3. Claim 1 of the second auxiliary request defines most clearly and specifically the invention and its difference vis-à-vis D1. The following discussion therefore focuses on the wording according to that claim. The appellant agreed with the Board that the discussion of

the second auxiliary request would, in substance, also apply to the other requests (see the minutes of the oral proceedings, page 2, first and second paragraphs).

4. Document D1 describes (see abstract) a system configured to help the operator in a mail sorting environment. The operator of D1 uses a wearable device (eyeglass type; see paragraph 24) which recognizes the destination address and indicates to the operator the sorting bin to be used. This can be done by using physical indicators (e.g. LEDs - paragraph 28) situated "*proximate to each of the possible sort locations*". Alternatively, the appropriate sorting bin may be indicated on the display of the wearable device, for instance by coordinates of the sorting bin (paragraphs 29, 46).

5. The starting point for the analysis of inventive step is the embodiment of D1 in which an indication is provided on the eye-glass device in the form of coordinates. The appellant and the Board agree that claim 1 of the second auxiliary request differs from this embodiment by the feature (emphasis by the Board):

signalling to the operator the relevant destination bin where the mailpiece is to be placed by highlighting the destination bin or projecting a visual artefact (36) on the transparent display, at a position corresponding to the destination bin in the view of the sorting station while the operator is looking at the sorting station through the transparent display.

In D1 the indication as to the destination bin is neither overlaid at the position of, nor does it

highlight, the destination bin, but is placed in an unspecified position on the display.

6. As the appellant also explained (see below), if a large sorting station is provided, the operator will have difficulties in finding the physical position corresponding to the given coordinates. The objective technical problem posed to the skilled person is therefore how to indicate the destination bin in a manner that facilitates finding its position.
7. In the Board's view, if the user has difficulties finding a certain position given its coordinates, a straightforward possibility of helping is to show him/her where it is by some sort of "finger pointing". In the framework of the eye-glass embodiment this means displaying an image artefact on the captured image, i.e. an overlay, pointing to the exact position. This yields the second alternative claimed.
 - 7.1 The Board remarks that it is otherwise commonly known in augmented reality contexts to pinpoint the position of an object of interest using an overlay. D3 is evidence of that in the context of a parcel warehouse: a user wearing an eye-glass type device is navigated to the position of an item to be picked up, is shown its exact position, and is also shown where it should be placed, all using arrow overlays.
 - 7.2 The skilled person would also take guidance from the remainder of D1. In the alternative embodiment of D1 the position of the destination bin is indicated by an LED proximate to it. The skilled person would understand that this makes it easier for the user to find the bin of interest and would thus reproduce this virtually in the framework of the eye-glass embodiment by

placing the virtual indicators in a position proximate to it, thereby arriving at the second claimed option (possibly also the first one, depending on the interpretation of "highlighting").

8. The appellant explained that, starting from D1, the difference deals with the problem of larger sorting areas. In that case, simply providing the coordinates of the sorting bin is insufficient, as it would take a long time for the user to find the bin. Likewise, lighting an LED next to the destination bin may be confusing if multiple operators operate in the same large area. The invention solves these problems in a non-obvious way. The appellant argued that the two embodiments of D1 were separate and not combinable, because they referred to different concepts, one using eye glasses as display for indicators, one using external LEDs. The solution presented in D3 provided a complete navigation system, so its solution was not compatible with that of D1.
9. These arguments fail to convince the Board. While they demonstrate that the claimed invention solves a technical problem starting from D1, they do not invalidate the argument above that the solution to the problem is obvious. In particular:
 - (a) The argument does not propose a combination of two embodiments. Rather, it refers to information from one (the LED positioning) as a hint to the skilled person as to how to improve the other, i.e. to position a virtual indicator in a position proximate to the location of the destination bin.

(b) D3 is not used as a combination document, but only as corroborating evidence for the fact that in augmented reality environments the overlay of information on, or proximate to, the object of interest is a matter of common knowledge, which fact the appellant did not contest as such.

10. The Board concludes therefore that all requests (see point 3 above) lack inventive step (Articles 52(1), 56 EPC).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



L. Stridde

M. Müller

Decision electronically authenticated