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# Datasheet for the decision of 3 June 2026

**Case Number:** T 2466/22 - 3.5.01

**Application Number:** 17821024.1

**Publication Number:** 3475898

**IPC:** G06Q10/08, B64C39/02

**Language of the proceedings:** EN

**Title of invention:**
INTERACTIVE TRANSPORT SERVICES PROVIDED BY UNMANNED AERIAL VEHICLES

**Applicant:**
Wing Aviation LLC

**Headword:**
Rotorcraft deliveries/WING AVIATION

**Relevant legal provisions:**
EPC Art. 56

**Keyword:**
Inventive step (no)



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**Case Number: T 2466/22 - 3.5.01**

# D E C I S I O N
# of Technical Board of Appeal 3.5.01
# of 3 June 2026

| | |
|---|---|
| **Appellant:** (Applicant) | Wing Aviation LLC<br>3400 Hillview Avenue, Building 4<br>Palo Alto, CA 94304 (US) |
| **Representative:** | Chettle, John Edward<br>Venner Shipley LLP<br>TIDE Bankside<br>8 Emerson Street<br>London SE1 9DU (GB) |
| **Decision under appeal:** | **Decision of the Examining Division of the European Patent Office posted/electronically transmitted on 14 June 2022 refusing European patent application No. 17821024.1 pursuant to Article 97(2) EPC.** |

**Composition of the Board:**

| | |
|---|---|
| **Chairman** | M. Höhn |
| **Members:** | L. Falò |
| | D. Rogers |

## Summary of Facts and Submissions

I. This is an appeal against the examining division's decision to refuse European patent application No. 17 821 024.1.

II. The following document was cited, among others, during the examination proceedings:

D2 US 2015/120094 A 1 (AMAZON TECHNOLOGIES, INC.) 30 April 2015 (2015-04-30)

III. The examining division refused the application on the ground of lack of inventive step of all requests in view of document D2.

IV. In the statement setting out the grounds of appeal, the appellant requested that the decision under appeal be set aside and a patent be granted on the basis of the main request or of auxiliary requests 1 to 8. The main request and auxiliary requests 4 to 8 correspond to the refused main request and to auxiliary requests 2, 3, 4, 1, 5, respectively. All the requests were filed or re-filed with the statement of grounds of appeal. There was a further request for oral proceedings if the main request was not considered allowable.

V. In a communication the board set out its preliminary view that neither the main nor the auxiliary requests involved an inventive step.

VI. In a letter of reply the appellant provided further arguments in favour of the patentability of all requests.

VII. Oral proceedings were held on 3 June 2026.

VIII. Claim 1 of the main request reads:

*A method comprising:*

*receiving, by a client computing device, a transport request for transport of one or more items by an unmanned aerial vehicle (UAV), wherein the UAV is a rotorcraft (180) which can take off and land vertically and is configured to lower a payload comprising the one or more items to the ground via a tether while the UAV hovers above;*

*responsive to receiving the transport request, the client computing device:*

*(i) determining one or more UAV-accessible sub-areas within a geographic area associated with the client computing device, wherein determining the one or more UAV-accessible sub-areas comprises:*

*determining that a sub-area of the geographic area is indicated by a topographical map to have an unobstructed vertical path between the ground and the sky which is large enough to lower the one or more items to the ground via the tether while the UAV hovers above; and*

*based at least in part on the sub-area having the unobstructed vertical path between the ground and the sky which is large enough to lower the one or more items to the ground via the tether while the UAV hovers above, determining that the sub-area is a UAV-accessible sub-area;*

*(ii) displaying, on a graphic display, a graphic map interface indicating the one or more UAV-accessible sub-areas;*

*receiving, via the graphic map interface of the client computing device, a selection of one of the one or more UAV-accessible sub-areas; and*

*responsive to receiving the selection, the client computing device causing the UAV to transport the one or more items to the selected UAV-accessible sub-area, comprising causing the UAV to deliver the one or more items to the selected UAV-accessible sub-area by lowering the one or more items to the ground via the tether while the UAV hovers above.*

IX. Claim 1 of auxiliary request 1 includes the further features of "*determining one or more surface features of the sub-area as indicated in the topographical map or as depicted in a satellite image of the geographic area*", and of determining that the sub-area is a UAV-accessible sub-area also based on said one or more surface features.

X. Claim 1 of the auxiliary request 2 with respect to the main request amends the steps of displaying of the graphic map interface, receiving a selection of the one or more UAV-accessible sub-areas and transporting the one or more items as follows:

*(ii) displaying, on a graphic display, a graphic map interface indicating the one or more DAV-accessible sub-areas;*

*receiving, via the graphic map interface of the client computing device, a selection of one of the one or more DAV-accessible sub-areas; and*

*responsive to receiving the selection, the client computing device causing the DAV to transport the one or more items to the selected DAV-accessible sub-area, comprising causing the DAV to deliver the one or more items to the selected DAV-accessible sub-area by lowering the one or more items to the ground via the tether while the DAV hovers above.*

XI. Claim 1 of the auxiliary request 3 with respect to auxiliary request 1 amends the "deliver" step (i.e. the last step) as follows:

*receiving, by the client computing device, status information indicating that, upon arrival at the selected UAV-accessible sub-area, the UAV has found the selected UAV accessible sub area to be obstructed, and responsively displaying, on the graphic map interface of the client computing device, one or more alternate UAV-accessible sub-areas;*

*and*

*receiving, via the graphic map interface of the client computing device, user input specifying a particular one of the displayed alternate UAV-accessible sub-areas, and responsively causing, by the client computing device, the UAV to transport the one or more items to the particular one of the alternate UAV-accessible sub-areas, comprising causing the UAV to deliver the one or more items to the particular one of the alternate UAV-accessible sub-areas by lowering the*

*one or more items to the ground via the tether while the UAV hovers above.*

XII. Claim 1 of the auxiliary request 4 to 7 essentially generalises the same claim of auxiliary requests 1, 2, 3 and of the main request, respectively, by omitting the expressions "*which is large enough to lower the one or more items to the ground via the tether while the UAV hovers above*" and "*comprising causing the UAV to deliver the one or more items to the selected UAV-accessible sub-area by lowering the one or more items to the ground via the tether while the UAV hovers above*".

XIII. Claim 1 of the auxiliary request 8 generalises the same claim of auxiliary request 5 by omitting the feature "*receiving, via the graphic map interface of the client computing device, a selection of one of the one or more DAV-accessible sub-areas, wherein receiving the selection of the one of the one or more DAV-accessible sub-areas comprises receiving, via the touchscreen, a user touch at a location of the graphic map interface which corresponds to the one of the one or more displayed DAV accessible-sub-areas*".

## Reasons for the Decision

1. The invention concerns the delivery of items using unmanned aerial vehicles (UAVs). A client computing device, such as a smartphone, receives from a user a request to dispatch an item using an unmanned aerial vehicle (UAV) ([0115]). The client device then determines, by consulting a topographical map, whether

in a geographic area associated with the user or with computing device there are any suitable ("UAV accessible") sub-areas ([0116], [120], [121]). A sub-area is deemed UAV-accessible based on whether it presents an unobstructed vertical path large enough to enable the delivery of the items (i.e. to reach the ground using a tether or to enable the UAV to land and take off, see [0121]) and, optionally, based on further surface characteristics (water, dirt, plants, see [0122]). If one or more UAV-accessible sub-areas are found, these are presented to the user for selection ([0119], [0128], Figures 6B and 6C), and the item is delivered to the selected sub-area.

Main request - inventive step

2. It is common ground that document D2 is the closest prior art. D2 discloses an UAV configured to autonomously deliver inventory items to a delivery location. The delivery location can be a user's current location or another location selected from a list or a map, including "*locations for which the user has received items via delivery from a UAV, other locations near the user that can receive UAV deliveries, or other locations that are configured to enable tracking of the current location of the vehicle*" ([0028]). In some embodiments, the selectable locations belong to a set of known, predefined "*secure delivery locations*" ([0029], [0067]). Once arrived at the delivery location, a suitable and obstacle-free landing area is determined, for example by means of sensors ([0127], [0139], [0140], [0141]).

3. The examining division was of the opinion that the pre-flight determination of the absence of obstructions in the vertical path was implicit in the determination,

disclosed in D2, of a location that could receive UAV deliveries. Therefore, claim 1 merely differed in the use of a topographical map, which was non-technical and also obvious.

4. The board observes that a pre-flight determination of whether a location can receive UAV deliveries can in principle be based on various criteria or constraints. While the presence of an unobstructed vertical path (and thus a suitable landing area or surface) is arguably one of these, it is not necessarily implied by a generic suitability to receive deliveries. Therefore, the pre-flight determination, in response to a user's transport request, of one or more UAV-accessible sub-areas presenting an unobstructed vertical path is neither explicitly nor implicitly anticipated by D2.

5. Accordingly, the board takes the view the following features of claim 1 are not disclosed in D2:

*determining that a sub-area of the geographic area is indicated by a topographical map to have an unobstructed vertical path between the ground and the sky which is large enough to lower the one or more items to the ground via the tether while the UAV hovers above; and*

*based at least in part on the sub-area having the unobstructed vertical path between the ground and the sky which is large enough to lower the one or more items to the ground via the tether while the UAV hovers above, determining that the sub-area is a UAV-accessible sub-area".*

6. Summarising, the board considers that claim 1 differs from D2 essentially in the criterion used for

determining the suitability of a (potential) destination or sub-areas presented to the user, i.e. an unobstructed vertical path between the ground and the sky which is large enough to lower the one or more items to the ground via the tether, and in the use of a topographic map to determine whether such sub-area is present prior to the flight.

7. The appellant argued that, by determining a suitable sub-area in response to each user request and thus in a dynamic manner, the differentiating features enabled to determine one or more UAV-accessible sub-areas which were not previously known as such. During oral proceedings the appellant further pointed out that in D2 there was no pre-flight determination of the landing areas. Landing areas were determined upon arrival of the drones on the selected delivery location, which were different from the claimed "UAV accessible sub areas". Furthermore, in D2 maps were used only in relation with the navigation, not the landing, and the determination of the landing area was done by the UAV rather than by a client computing device.

The appellant further formulated the objective technical problem solved as how to more reliably offer UAV-accessible locations in a given geographical area, or how to improve the likelihood that a selected destination be suitable for landing. Because of the display of the UAV-accessible sub-areas and of the required user selection, the system credibly assisted the user in the interaction with the underlying technical system, i.e. the UAV delivery system.

8. The board disagrees with the formulation of the technical problem proposed by the appellant. D2 provides the user with a list of destination locations.

The criteria used for selecting these locations (locations for which the user has already received deliveries or location known as being secure locations, see D2, paragraphs [0028] and [0029]) are not necessarily less reliable than the use of a topographical map.

9. In D2 the user is presented, before the flight starts, with a selectable list of delivery locations that "can receive UAV deliveries" ([0028]).

The objective technical problem, starting from D2, can be formulated as how to provide an alternative way to determine a delivery location which can receive UAV deliveries.

10. In the board's view, the presence of a suitable landing area is one of the obvious requirements to be satisfied for a delivery location to be suitable. The board notes in this respect that, even though in D2 the actual landing area is determined upon landing, this can be done based on pre-stored information obtained by the UAV management system ([0139]).

11. The board further considers that the presence of an unobstructed vertical path is one of the obvious criteria to be satisfied when delivering items by means of a tether. D2 explicitly discloses the requirement that there be no obstacles in the landing area and/or in the path between the UAV and the landing area ([0141]), which obviously includes also the vertical path to the landing area.

12. In view of the above, the board takes the view that it would be an obvious possibility for the skilled person to solve the aforementioned problem by presenting the

user with a list of one or more potential destinations which present a sufficiently large and unobstructed vertical path. Making use of a topographical map to make such a determination is also considered an obvious possibility, particularly in view of the fact that D2 discloses - even though only during flight - the use of maps and other "static" environmental information to determine possible obstacles surrounding the UAV (paragraph [0133]).

13. The board is not convinced by the argument that the claimed method enables to dynamically determine a previously unknown landing area. Even though the determination is carried out for each user request, it is always based on the same static information, that is, the topographical map, and will therefore provide the same results for the same geographic area.

14. Accordingly, the board concludes that the skilled person, aware of D2 and faced with the aforementioned technical problem, would arrive at the disclosure of claim 1 without making use of an inventive activity. Claim 1 lacks therefore an inventive step over D2, Article 56 EPC.

Auxiliary request 1

15. Claim 1 of auxiliary request 1 adds a further criterion for the selection of the UAV-accessible sub-area, i.e. the use of one or more "surface features". The claim does not further define these features, nor how they are used for the determination of the UAV-accessible sub-areas.

16. In view of the very vague wording of the claim the board regards this further feature does not credibly

provide a technical effect. Moreover, considering generic surface characteristics when determining a suitable destination or landing area is an obvious possibility.

17. Claim 1 lacks therefore an inventive step, Article 56 EPC.

Auxiliary request 2

18. Claim 1 of auxiliary request 2 provides further details of the design of a user interface which are of non-technical nature, as they define a mere presentation of information, which is excluded as such from patentability under Articles 52(2)(3) EPC, and are implemented in an obvious manner on a display screen comprising a touch screen.

19. During oral proceedings the appellant argued that these features provided a technical effect, as the display gives the user guidance in performing a technical task, that is, verifying that the UAV accessible sub area is suitable for landing.

20. The board finds this argument unconvincing, as the actual determination that an area is suitable for landing is carried out by the computer system. The representation of the the graphical map as defined in step (ii) at most provides a visualisation of the criterion used to arrive at this determination.

Auxiliary request 3

21. The features added to claim 1 solve the technical problem of selecting an alternative landing if the selected one is obstructed. It would be one of the

obvious possibilities to prompt the user to select an alternate sub-area from the user interface, particularly in view of the fact that D2 discloses interaction between UAV and user during landing to confirm (paragraph [0141]) as well as the section of an alternate area [0142]).

Therefore, claim 1 lacks an inventive step over claim 1.

Auxiliary requests 4-8

22. The subject matter of claim 1 of auxiliary requests 4, 5, 6, 7, essentially generalises that of claim 1 of auxiliary request 1, auxiliary request 2, auxiliary request 3, main request, respectively, and claim 1 of auxiliary request 8 generalises the subject matter of auxiliary request 5 and, therefore, also of auxiliary request 2. auxiliary request 5.

Hence, claim 1 of all these requests lacks an inventive step for the same reasons provided for the higher-ranking requests, *mutatis mutandis*.

Conclusion

23. Since there is no allowable request on file, the appeal must be dismissed.

## Order

**For these reasons it is decided that:**

The appeal is dismissed.

The Registrar: The Chairman:

S. Sánchez Chiquero M. Höhn

Decision electronically authenticated