

CLAIMS

What is claimed is:

1. A computer-implemented method for validating a balcony to receive aerial delivery of a parcel via an unmanned aerial vehicle (UAV), the method comprising:
 - obtaining, via a computing device, a first identification of a general location of the balcony;
 - generating, for display on the computing device, a first image representing a building, wherein the building includes the balcony and the first image is selected based upon the general location identified by the end-user;
 - obtaining, via the computing device, a second identification or a confirmation of a precise location of the balcony in the building, wherein the second identification or the confirmation are received in response to an end-user interaction with the first image;
 - determining a deliverability score based at least in part on the precise location of the balcony; and
 - indicating an enrollment status to the end-user, via the computing device, the enrollment status generated based upon the deliverability score.
2. The computer-implemented method of claim 1, wherein the enrollment status includes at least one of an enrollment rejected indication, an enrollment successful indication, or a flyby validation required indication.
3. The computer-implemented method of claim 1, further comprising:
 - receiving a picture captured with the computing device, wherein the picture is of the balcony or captured from the balcony; and
 - analyzing the picture for one or more of an obstruction to accessing the balcony or sufficient space on the balcony to deliver the parcel via the UAV,
 - wherein the deliverability score is further determined based at least in part on a combination of the picture and the precise location.

4. The computer-implemented method of claim 1, wherein the first identification of the general location of the balcony comprises a physical address of the building, and a unit number associated with the balcony, if any.

5. The computer-implemented method of claim 4, further comprising:
determining an initial altitude associated with the balcony based upon one or more of the first identification of the general location, the second identification of the precise location, or the confirmation of the precise location; and
instructing the UAV to hover at the initial altitude upon arriving in a vicinity of the balcony to commence searching for the balcony.

6. The computer-implemented method of claim 1, wherein generating the first image representing the building comprises at least one of:
generating an aerial map image of a vicinity surrounding and including the building; or
providing a visual model or a picture of a side of the building that includes the balcony.

7. The computer-implemented method of claim 6, wherein obtaining the second identification comprises soliciting the end-user to indicate the precise location by touching a position on the aerial map image, the visual model, or the picture where the balcony is located.

8. The computer-implemented method of claim 1, further comprising:
acquiring a network identifier from the computing device, wherein the network identifier identifies a wireless network signal used by the computing device to wirelessly communicate with other computing devices; and
providing the network identifier to the UAV to aid in locating the balcony.

9. The computer-implemented method of claim 1, further comprising:
generating a fiducial marker;

associating the fiducial marker with the balcony or the end-user; and
providing the fiducial marker to the computing device for display from the balcony to aid the UAV in identification of the balcony.

10. The computer-implemented method of claim 9, further comprising:
informing the end-user, via the computing device, that the UAV has arrived in a vicinity of the balcony; and
requesting that the fiducial marker be displayed from the balcony for visual identification by the UAV.

11. The computer-implemented method of claim 1, further comprising:
informing the end-user, via the computing device, that the UAV has arrived in a vicinity of the balcony;
soliciting the end-user to provide directional feedback to the UAV for identification of a target delivery location on the balcony; and
registering the target delivery location for future deliveries to the balcony based at least in part upon the directional feedback.

12. The computer-implemented method of claim 1, further comprising:
providing a confirmatory image of the balcony to the end-user, the confirmatory image acquired by the UAV during a validation flyby; and
soliciting the end-user to validate the confirmatory image as correctly identifying the balcony.

13. At least one machine-accessible storage medium that provides instructions that, when executed by a machine, will cause the machine to perform operations comprising:
obtaining, via a computing device, a first identification of a general location of a balcony to receive delivery of a parcel via an unmanned aerial vehicle (UAV);

generating, for display on the computing device, a first image representing a building, wherein the building includes the balcony and the first image is selected based upon the general location identified by the end-user;

obtaining, via the computing device, a second identification or a confirmation of a precise location of the balcony in the building, wherein the second identification or the confirmation are received in response to an end-user interaction with the first image;

determining a deliverability score based at least in part on the precise location of the balcony; and

indicating an enrollment status to the end-user, via the computing device, the enrollment status generated based upon the deliverability score.

14. The at least one machine-accessible storage medium of claim 13, wherein the enrollment status includes at least one of an enrollment rejected indication, an enrollment successful indication, or a flyby validation required indication.

15. The at least one machine-accessible storage medium of claim 13, wherein the operations further comprise:

receiving a picture captured with the computing device, wherein the picture is of the balcony or captured from the balcony; and

analyzing the picture for one or more of an obstruction to accessing the balcony or sufficient space on the balcony to deliver the parcel via the UAV,

wherein the deliverability score is further determined based at least in part on a combination of the picture and the precise location.

16. The at least one machine-accessible storage medium of claim 13, wherein the first identification of the general location of the balcony comprises a physical address of the building, and a unit number associated with the balcony, if any.

17. The at least one machine-accessible storage medium of claim 16, wherein the operations further comprise:

determining an initial altitude associated with the balcony based upon one or more of the first identification of the general location, the second identification of the precise location, or the confirmation of the precise location; and

instructing the UAV to hover at the initial altitude upon arriving in a vicinity of the balcony to commence searching for the balcony.

18. The at least one machine-accessible storage medium of claim 13, wherein generating the first image representing the building comprises at least one of:

generating an aerial map image of a vicinity surrounding and including the building; or

providing a visual model or a picture of a side of the building that includes the balcony.

19. The at least one machine-accessible storage medium of claim 18, wherein obtaining the second identification comprises soliciting the end-user to indicate the precise location by touching a position on the aerial map image, the visual model, or the picture where the balcony is located.

20. The at least one machine-accessible storage medium of claim 13, wherein the operations further comprise:

acquiring a network identifier from the computing device, wherein the network identifier identifies a wireless network signal used by the computing device to wirelessly communicate with other computing devices; and

providing the network identifier to the UAV to aid in locating the balcony.

21. The at least one machine-accessible storage medium of claim 13, wherein the operations further comprise:

generating a fiducial marker;

associating the fiducial marker with the balcony or the end-user; and

providing the fiducial marker to the computing device for display from the balcony to aid the UAV in identification of the balcony.

22. The at least one machine-accessible storage medium of claim 21, wherein the operations further comprise:

informing the end-user, via the computing device, that the UAV has arrived in a vicinity of the balcony; and

requesting that the fiducial marker be displayed from the balcony for visual identification by the UAV.

23. The at least one machine-accessible storage medium of claim 13, wherein the operations further comprise:

informing the end-user, via the computing device, that the UAV has arrived in a vicinity of the balcony;

soliciting the end-user to provide directional feedback to the UAV for identification of a target delivery location on the balcony; and

registering the target delivery location for future deliveries to the balcony based at least in part upon the directional feedback.

24. The at least one machine-accessible storage medium of claim 13, wherein the operations further comprise:

providing a confirmatory image of the balcony to the end-user, the confirmatory image acquired by the UAV during a validation flyby; and

soliciting the end-user to validate the confirmatory image as correctly identifying the balcony.