Claims

1. A mobile drive apparatus for item handling comprising:

at least one platform for supporting an item;

a drive means;

a movable door coupled to the at least one platform and configured to move between an open position in which the platform is accessible to a user and a closed position in which the platform is enclosed; and

a control means coupled to the drive means and comprising a user interface unit,

wherein the mobile drive apparatus is configured to detect when an item has been placed on the at least one platform;

wherein, if the mobile drive apparatus detects that an item has been on the at least one platform, the user interface unit is configured to extract data from a token presented by the user to the user interface unit, and determine if the presented token is a valid token, based at least in part on the extracted data;

wherein, if the user interface unit determines that the presented token is a valid token, the mobile drive apparatus is configured to move the movable door to the closed position, and the control means is configured to control the drive means to move the mobile drive apparatus from a current location associated with an item pickup point to a second different location for processing by an item handling hub.

2. A mobile drive apparatus for item handling comprising:

at least one platform for supporting an item;

a drive means;

a movable door coupled to the at least one platform and configured to move between an open position in which the platform is accessible to a user and a closed position in which the platform is enclosed; and

a control means coupled to the drive means and comprising a user interface unit,

wherein the user interface unit is configured to extract data from a token presented by the user to the user interface unit, and determine if the presented token is a valid token, based at least in part on the extracted data;

wherein, if the user interface unit determines that the presented token is a valid token, the mobile drive apparatus is configured to move the movable door to the open position, detect when an item has been placed on the at least one platform, and then move the movable door to the closed position once an item has been placed on the at least one platform;

and wherein, once the moveable door has been moved to the closed position, the control means is configured to control the drive means to move the drive apparatus from a current location associated with an item pickup point to a second different location for processing by an item handling hub.

3. A mobile drive apparatus according to claim 1 or claim 2, wherein the control means is configured to communicatively couple with a remote computer or server, such as a departure control system, and receive a communication from said remote computer or server indicating that the token presented by the user has been determined to be a valid token.

4. A mobile apparatus according to any one of the preceding claims, wherein the control means is configured to determine whether the presented token is a valid token, by comparing the extracted data with stored data.

5. A mobile drive apparatus according to any one of the preceding claims, wherein the user interface unit is configured to distinguish between different types of tokens based on a barcode format associated with the token.

6. A mobile drive apparatus according to any one of the preceding claims, wherein the user interface unit is configured to determine whether the token is a bag tag or a boarding pass based on the format of the token.

7. A mobile drive apparatus according to any one of the preceding claims, wherein the user interface unit comprises reading means for reading a token presented by a user.

8. A mobile drive apparatus according to any preceding claim wherein the drive means comprises a differential drive arrangement comprising a first motor coupled to a first driving mechanism means and a second motor coupled to a second driving mechanism means.

9. A mobile drive apparatus according to any preceding claim wherein the or a first and second driving mechanism means are positioned approximately in the centre of the drive apparatus measured in a longitudinal direction from the front to the rear of the drive apparatus.

10. A mobile drive apparatus according to any preceding claim further comprising an electrical power source, and preferably wherein the power source comprises a split power source arrangement comprising first and second power sources.

11. A mobile drive apparatus according to claim 10 wherein the first power source is positioned in close proximity to the axis of rotation of driving mechanism means and preferably where the second power source is positioned substantially at one end of the drive apparatus.

12. A mobile drive apparatus according to any preceding claim wherein drive apparatus comprises a plurality of doors and wherein each door is independently moveable.

13. A mobile drive apparatus according to any preceding claim wherein drive apparatus comprises a plurality of hold compartments separated by a partition.

14. A mobile drive apparatus according to any preceding claim wherein each door comprises a first planar portion which extends to cover one face of the drive unit and a second planar portion extends to cover a second different face of the drive unit, and preferably wherein the first and second planar portions are substantially perpendicular.

15. A mobile drive apparatus according to any preceding claim further comprising a door mechanism for slideably moving the at least one movable door between the open position and the closed position.