**CLAIMS**

1. A method for controlling the landing of a propulsion device,

a. wherein the propulsion device comprises:

i. a platform;

ii. a thrust unit including a command means;

iii. support means arranged to hold and support the thrust unit, integrally cooperating via one or more suitable mechanical links with the platform;

iv. projecting means, integrally cooperating via suitable mechanical links with the platform;

v. projecting means actuators associated with the projecting means, for which the projecting means are retractable, each projecting means actuator being respectively arranged to induce a translational movement, jointly or separately, of the projecting means, wherein the projecting means actuators are controlled by projecting means electrical commands;

vi. a central leg, passing through the centre of inertia of the propulsion device and integrally cooperating via a suitable mechanical link at its proximal end with the platform, wherein the projecting means and the central leg are mutually arranged so that the central leg provides a first contact between the propulsion device and a surface for receiving the propulsion device;

vii. a proximity sensor arranged to deliver a projecting means measurement and a central leg measurement representative of a distance between the proximity sensor and the surface; and

viii. a processing unit designed to generate the projecting means electrical commands based on a control setpoint and/or a reference system determined by one or more configuration parameters; and

b. wherein the method is implemented by the processing unit of the propulsion device and the method comprises:

i. a projecting means step for collecting and comparing the projecting means measurement to a projecting means predetermined threshold; and

ii. a projecting means step for preparing and delivering one of the projecting means electrical commands that can be interpreted by the projecting means actuators, so as to induce the joint or separate deployments of the projecting means when the projecting means measurement reaches the projecting means predetermined threshold.

2. The method according to the preceding claim,

a. wherein the propulsion device further comprises a central leg actuator cooperating with the central leg, for which the central leg is retractable, the central leg actuator being arranged to induce a translational movement of the central leg, wherein the central leg actuator is controlled by central leg electrical commands generated by the processing unit based on a control setpoint and/or a reference system determined by one or more configuration parameters; and

b. wherein the method further includes, prior to the projecting means step for collecting and comparing:

i. a central leg measurement step for collecting and comparing the central leg measurement to a central leg predetermined threshold strictly greater than the projecting means predetermined threshold; and

ii. a central leg deployment step for preparing and delivering one of the central leg electrical commands that can be interpreted by the central leg actuator when the central leg distance measurement reaches the central leg predetermined threshold, so as to induce the deployment of the central leg.

3. The method according to any one of the preceding claims, in which the projecting means step for preparing and delivering includes three sub-steps in the case of a separate deployment of the projecting means, the three sub-steps consisting of:

a. a first sub-step for preparing and delivering a first electrical sub-command that can be interpreted by the actuator associated with a first projecting means, so as to induce the deployment of the first projecting means;

b. a second sub-step for preparing and delivering a second electrical sub-command that can be interpreted by the actuator associated with a second projecting means, so as to induce the deployment of the second projecting means; and
c. a third sub-step for preparing and delivering third electrical sub-commands that can be interpreted by the actuators associated with a third and a fourth projecting means, so as to induce the respective deployments of the third and fourth projecting means.

4. The method according to any one of the preceding claims, the method further including, subsequent to or jointly with the projecting means step for preparing and delivering, a stabilizing thrust reversal step for preparing and delivering a stabilizing thrust reversal electrical command that can be interpreted by the command means, so as to produce a stabilizing thrust reversal, when the projecting means measurement reaches the projecting means predetermined threshold.

5. The method according to claim 2, including a central leg withdrawal step, for preparing and delivering, subsequent to the projecting means step for preparing and delivering, when the projecting means are deployed and stabilized in contact with a receiving surface, when the central leg distance measurement reaches the central leg predetermined threshold, one of the central leg electrical commands, so as to allow the withdrawal of the central leg.

6. The method according to any one of the preceding claims, the method further including, subsequent to the projecting means step for preparing and delivering, a stabilizing thrust shut down step for preparing and delivering a stabilizing thrust shut down electrical command that can be interpreted by the command means, so as to induce shutting down the thrust unit , when the projecting means are deployed and stabilized in contact with the receiving surface.

7. The method according to any one of the preceding claims, wherein the proximity sensor integrally cooperates via a suitable mechanical link with the central leg.

8. A propulsion device comprising a processing unit and being arranged so as that the processing unit prepares electrical commands of actuators according to a control method to any of the preceding claims.

9. The propulsion device according to claim 8, wherein the platform is arranged to receive one or more passengers.

10. The propulsion device according to any one of claims 8 to 9, wherein the thrust unit is arranged to supply a resultant thrust force oriented in a direction such as to supply a substantially vertical take-off and landing capability.

11. The propulsion device according to any one of claims 8 to 10, including a human-machine input interface designed to translate a gestural sign of a user to an actuation setpoint of the central leg and/or of the projecting means or the command means.

12. The propulsion device according to any one of claims 8 to 11, wherein the projecting means comprise four peripheral legs or two landing skids.