approach path from the other of the predefined MPA approach paths on the display unit, according to some embodiments.

In one embodiment, there is provided a computer-readable storage medium comprising computer-executable instructions that, when executed by a computer, cause the computer to: receive an assigned approach path to an arrival runway for an aircraft, wherein the assigned approach path comprises one of a plurality of predefined fixed multi-path arrival ("MPA") approach paths associated with the arrival runway; retrieve data regarding the plurality of predefined fixed MPA approach paths; and display the plurality of predefined fixed MPA approach paths on a display unit of the aircraft, visually differentiating the assigned approach path.

In another embodiment, there is provided a system for displaying multi-path arrival ("MPA") procedures in a graphical display of an aircraft, the system comprising: a display unit in a cockpit of the aircraft; a memory for storing a program containing computer-executable instructions for displaying MPA approach paths on the display unit; and a processing unit functionally coupled to the memory and the display unit, the processing unit being responsive to the computer-executable instructions and configured to: receive an assigned approach path to an arrival runway for the aircraft, wherein the assigned approach path comprises one of a plurality of predefined fixed MPA approach paths associated with the arrival runway, retrieve data regarding the plurality of predefined MPA approach paths, and display the plurality of predefined fixed MPA approach paths on the display unit, visually differentiating the assigned approach path.

The following paragraphs further describe possible embodiments:

A. A computer-implemented method for displaying an assigned approach path on a display unit of a vehicle, the method comprising:

receiving, by a computer system of the aircraft, the assigned approach path to an arrival area;

retrieving, by the computer system, data regarding a plurality of predefined fixed approach paths associated with the arrival area; and

displaying, by the computer system, the assigned approach path on the display unit in conjunction with other of the plurality of predefined fixed approach paths associated with the arrival area.

B. The computer-implemented method of A, wherein the assigned approach path is color-coded to differentiate the assigned approach path from the other of the plurality of predefined approach paths on the display unit.

C. The computer-implemented method of A or B, further comprising:

receiving, by the computer system, traffic information regarding other vehicles operating within proximity of the arrival area; and

displaying an indication of a position and heading of the other vehicles on the display unit in conjunction with the display of the assigned approach path.

D. The computer-implemented method of C, wherein the traffic information comprises an assigned approach path corresponding to each of the other vehicles, and wherein each of the indications of the position and heading of the other vehicles displayed on the display unit is color-coded

CLAIMS

What is claimed is:

1. A computer-readable storage medium comprising computer-executable instructions that, when executed by a computer, cause the computer to:

receive an assigned approach path to an arrival runway for an aircraft, wherein the assigned approach path comprises one of a plurality of predefined multi-path arrival ("MPA") approach paths associated with the arrival runway;

retrieve data regarding the plurality of predefined MPA approach paths; and

display the assigned approach path on a display unit of the aircraft.

2. The computer-readable storage medium of claim 1, wherein the assigned approach path is displayed on the display unit in conjunction with other of the plurality of predefined MPA approach paths associated with the arrival runway.

3. The computer-readable storage medium of claim 2, wherein the assigned approach path is color-coded to differentiate the assigned approach path from the other of the plurality of predefined MPA approach paths on the display unit.

4. The computer-readable storage medium of claims 2 or 3, comprising further computer-executable instructions that cause the computer to:

receive traffic information regarding other aircraft within an airspace of the arrival runway; and

display an indication of a position and heading of the other aircraft on the display unit in conjunction with the display of the assigned approach path.

5. The computer-readable storage medium of claim 4, wherein the traffic information comprises an assigned approach path corresponding to each of the other aircraft, and wherein each of the indications of the position and heading of the other aircraft displayed on the display unit is color-coded based on the assigned approach path corresponding to the other aircraft.

6. The computer-readable storage medium of claims 1-5, wherein the assigned approach path is received electronically via an air traffic control ("ATC") datalink.

7. The computer-readable storage medium of claims 1-6, wherein the plurality of predefined MPA approach paths comprise trombone-style arrival paths.

8. A system for displaying multi-path arrival ("MPA") procedures in a graphical display of an aircraft, the system comprising:

a display unit in a cockpit of the aircraft;

a memory for storing a program containing computer-executable instructions for displaying MPA approach paths on the display unit; and

a processing unit functionally coupled to the memory and the display unit, the processing unit being responsive to the computer-executable instructions and configured to:

receive an assigned approach path to an arrival runway for the aircraft, wherein the assigned approach path comprises one of a plurality of predefined MPA approach paths associated with the arrival runway,

retrieve data regarding the plurality of predefined MPA approach paths, and

display the assigned approach path on the display unit.

9. The system of claim 8, wherein the assigned approach path is displayed on the display unit in conjunction with other of the plurality of predefined MPA approach paths associated with the arrival runway.

10. The system of claim 9, wherein the assigned approach path is color-coded to differentiate the assigned approach path from the other of the plurality of predefined MPA approach paths on the display unit.

11. The system of claims 9 or 10, wherein the processing unit is further configured to:

receive traffic information regarding other aircraft within an airspace of the arrival runway, the traffic information comprising an assigned approach path corresponding to each of the other aircraft; and

display an indicator for each of the other aircraft on the display unit in conjunction with the display of the assigned approach path, wherein each of the indicators is color-coded based on the assigned approach path corresponding to the other aircraft.

12. The system of claims 8-11, wherein the assigned approach path is received electronically via an air traffic control ("ATC") datalink.

13. The system of claim 12, wherein a flight plan for the aircraft is automatically updated from the received assigned approach path.

14. The system of claims 8-13, wherein the plurality of predefined MPA approach paths comprise trombone-style arrival paths.

15. A computer-implemented method for displaying an assigned approach path on a display unit of a vehicle, the method comprising:

receiving, by a computer system of the aircraft, the assigned approach path to an arrival area;

retrieving, by the computer system, data regarding a plurality of predefined approach paths associated with the arrival area; and

displaying, by the computer system, the assigned approach path on the display unit in conjunction with other of the plurality of predefined approach paths associated with the arrival area.

CLAIMS

What is claimed is:

1. A computer-readable storage medium comprising computer-executable instructions that, when executed by a computer, cause the computer to: receive an assigned approach path to an arrival runway for an aircraft, wherein the assigned approach path comprises one of a plurality of predefined fixed multi-path arrival ("MPA") approach paths associated with the arrival runway; retrieve data regarding the plurality of predefined fixed MPA approach paths; and display the plurality of predefined fixed MPA approach paths on a display unit of the aircraft, visually differentiating the assigned approach path.

2. The computer-readable storage medium of claim 1, wherein the assigned approach path is color-coded to differentiate the assigned approach path from other predefined fixed MPA approach paths on the display unit.

3. The computer-readable storage medium of claim 1, comprising further computer-executable instructions that cause the computer to: receive traffic information regarding other aircraft within an airspace of the arrival runway; and display an indication of a position and heading of the other aircraft on the display unit in conjunction with the display of the assigned approach path.

4. The computer-readable storage medium of claim 3, wherein the traffic information comprises an assigned approach path corresponding to each of the other aircraft, and wherein each of the indications of the position and heading of the other aircraft displayed on the display unit is color-coded based on the assigned approach path corresponding to the other aircraft.

5. The computer-readable storage medium of claim 1, wherein the assigned approach path is received electronically via an air traffic control ("ATC") datalink.

6. The computer-readable storage medium of claim 1, wherein the plurality of predefined fixed MPA approach paths comprise trombone-style arrival paths.

7. A system for displaying multi-path arrival ("MPA") procedures in a graphical display of an aircraft, the system comprising: a display unit in a cockpit of the aircraft; a memory for storing a program containing computer-executable instructions for displaying MPA approach paths on the display unit; and a processing unit functionally coupled to the memory and the display unit, the processing unit being responsive to the computer-executable instructions and configured to: receive an assigned approach path to an arrival runway for the aircraft, wherein the assigned approach path comprises one of a plurality of predefined fixed MPA approach paths associated with the arrival runway, retrieve data regarding the plurality of predefined MPA approach paths, and display the plurality of predefined fixed MPA approach paths on the display unit, visually differentiating the assigned approach path.

8. The system of claim 7, wherein the assigned approach path is color-coded to differentiate the assigned approach path from the other of the plurality of predefined fixed MPA approach paths on the display unit.

9. The system of claim 7, wherein the processing unit is further configured to: receive traffic information regarding other aircraft within an airspace of the arrival runway, the traffic information comprising an assigned approach path corresponding to each of the other aircraft; and display an indicator for each of the other aircraft on the display unit in conjunction with the display of the assigned approach path, wherein each of the

indicators is color-coded based on the assigned approach path corresponding to the other aircraft.

10. The system of claim 7, wherein the assigned approach path is received electronically via an air traffic control ("ATC") datalink.

11. The system of claim 10, wherein a flight plan for the aircraft is automatically updated from the received assigned approach path.

12. The system of claim 7, wherein the plurality of predefined fixed MPA approach paths comprise trombone-style arrival paths.

13. A computer-implemented method for displaying an assigned approach path on a display unit of a vehicle, the method comprising: receiving, by a computer system of the aircraft, the assigned approach path to an arrival area; retrieving, by the computer system, data regarding a plurality of predefined fixed approach paths associated with the arrival area; and displaying, by the computer system, the assigned approach path on the display unit in conjunction with other of the plurality of predefined fixed approach paths associated with the arrival area.

14. The computer-implemented method of claim 13, wherein the assigned approach path is color-coded to differentiate the assigned approach path from the other of the plurality of predefined fixed approach paths on the display unit.

15. The computer-implemented method of claim 13, further comprising: receiving, by the computer system, traffic information regarding other vehicles operating within proximity

of the arrival area; and displaying an indication of a position and heading of the other vehicles on the display unit in conjunction with the display of the assigned approach path.

16. The computer-implemented method of claim 15, wherein the traffic information comprises an assigned approach path corresponding to each of the other vehicles, and wherein each of the indications of the position and heading of the other vehicles displayed on the display unit is color-coded based on the assigned approach path corresponding to the other vehicle.

17. The computer-implemented method of claim 13, wherein the assigned approach path is received electronically via an air traffic control ("ATC") datalink.

18. The computer-implemented method of claim 13, wherein the plurality of predefined fixed approach paths comprise multi-path arrival ("MPA") procedures.