CLAIMS

1. A system for optimising the control of an aircraft at an airport, the system comprising:

a state store module which is configured to store flight schedule data for the aircraft;

a connection management module which is coupled for communication with the state store module, the connection management module being configured to receive and process:

aircraft status data which is indicative of the current status of the aircraft;

connection data which is indicative of at least a time of transfer of a passenger and/or baggage from a previous aircraft to the aircraft, wherein the connection management module is configured to compare the flight schedule data with the aircraft status data and the connection data and to calculate, based on the comparison, a connection indicator which indicates the likelihood of a passenger and/or baggage transferring from the previous aircraft to the aircraft within a predetermined minimum connection time;

constraints data which is indicative of one or more of an aircraft turnaround time, a change in gate availability, an airport curfew, seat availability, hotel room availability and/or passenger requirements; and

consequence data which is indicative of a future consequence which is affected by the control of the aircraft to wait or to not wait for a passenger and/or baggage to transfer to the aircraft from a previous aircraft, wherein the consequence data is indicative of the impact on future flights resulting from a delay due to the aircraft waiting for a passenger and/or baggage to transfer to the aircraft from a previous aircraft, and wherein the consequence data is indicative of a delay caused to a return leg of the aircraft due to the aircraft waiting for a

passenger and/or baggage to transfer to the aircraft from a previous aircraft; and wherein the system further comprises:

a recommendation module which is configured to generate, based on the connection indicator, a recommendation output message to control the aircraft to:

wait for a passenger and/or baggage to transfer from the previous aircraft to the aircraft, or

not to wait for a passenger and/or baggage which is scheduled to transfer from the previous aircraft to the aircraft.

2. The system of claim 1, wherein the connection management module is further configured to receive and process:

historical variable data which is indicative of at least one variable which historically affected the time taken for a passenger and/or baggage to transfer from one aircraft to another aircraft at the airport.

3. The system of claim 2, wherein the historical variable data comprises:

at least one of historical flight departure data, historical flight boarding data, historical flight connection data, historical baggage transfer time data and/or historical data indicative of travel time between gates.

4. The system of any one of the preceding claims, wherein the aircraft status data comprises:

at least one or more of real-time flight schedule updates from air traffic control, on-demand information provided by airlines and/or flight status updates.

5. The system of claim 1, wherein the connection management module is configured to generate the connection indicator based at least in part on the constraints data.

6. The system of claim 1, wherein the consequence data is indicative of the number of hotel rooms and/or meal vouchers which would be required as a consequence of not waiting for a passenger and/or baggage to transfer to the aircraft from a previous aircraft.

7. The system of claim 1 or claim 6, wherein the consequence data is indicative of the number of tickets that must be re-booked due to the aircraft not waiting for a passenger and/or baggage to transfer to the aircraft from a previous aircraft.

8. The system of any one of the preceding claims, wherein the recommendation module is configured to output a plurality of recommendation output messages to a user such that the user can accept or reject one or more of the recommendation output messages to control the aircraft to wait or to not wait for a passenger and/or baggage to transfer to the aircraft from a previous aircraft.

9. The system of any one of the preceding claims, wherein the system further comprises a display module which is configured to display information comprising at least the recommendation output message to a user.

10. A method for optimising the control of an aircraft at an airport, the method comprising:

storing flight schedule data for the aircraft;

receiving and processing:

aircraft status data which is indicative of the current status of the aircraft; and

connection data which is indicative of at least a time of transfer of a passenger and/or baggage from a previous aircraft to the aircraft;

comparing the flight schedule data with the aircraft status data and the connection data;

receiving and processing constraints data which is indicative of one or more of an aircraft turnaround time, a change in gate availability, an airport curfew, seat availability, hotel room availability and/or passenger requirements;

receiving and processing consequence data which is indicative of a future consequence which is affected by the control of the aircraft to wait or to not wait for a passenger and/or baggage to transfer to the aircraft from a previous aircraft, wherein the consequence data is indicative of the impact on future flights resulting from a delay due to the aircraft waiting for a passenger and/or baggage to transfer to the aircraft from a previous aircraft, and wherein the consequence data is indicative of a delay caused to a return leg of the aircraft due to the aircraft waiting for a passenger and/or baggage to transfer to the aircraft from a previous aircraft;

calculating, based on the comparison, a connection indicator which indicates the likelihood of a passenger and/or baggage transferring from the previous aircraft to the aircraft within a predetermined minimum connection time;

generating, based on the connection indicator, a recommendation output message to control the aircraft to:

wait for a passenger and/or baggage to transfer from the previous aircraft to the aircraft, or

not to wait for a passenger and/or baggage which is scheduled to transfer from the previous aircraft to the aircraft.

11. The method of claim 10, wherein the method further comprises:

receiving and processing historical variable data which is indicative of at least one variable which historically affected the time taken for a passenger and/or baggage to transfer from one aircraft to another aircraft at the airport.

12. The method of claim 11, wherein the historical variable data comprises:

at least one of historical flight departure data, historical flight boarding data, historical flight connection data, historical baggage transfer time data and/or historical data indicative of travel time between gates.

13. The method of any one of claims 10 to 12, wherein the aircraft status data comprises:

at least one or more of real-time flight schedule updates from air traffic control, on-demand information provided by airlines and/or flight status updates.

14. The method of claim 10, wherein the method further comprises:

generating the connection indicator based at least in part on the constraints data.

15. The method of claim 10, wherein the consequence data is indicative of the number of hotel rooms and/or meal vouchers which would be required as a consequence of the aircraft not waiting for a passenger and/or baggage to transfer to the aircraft from a previous aircraft.

16. The method of claim 10 or claim 15, wherein the consequence data is indicative of the number of tickets that must be re-booked due the aircraft not waiting for a passenger and/or baggage to transfer to the aircraft from a previous aircraft.

17. The method of any one of claims 10 to 16, wherein the method further comprises:

outputting a plurality of recommendation output messages to a user such that the user can accept or reject one or more of the recommendation

output messages to control the aircraft to wait or to not wait for a passenger and/or baggage to transfer to the aircraft from a previous aircraft.

18. The method of any one of claims 10 to 17, wherein the method further comprises:

displaying information comprising at least the recommendation output message to a user.

19. A computer program having instructions which, when executed by a computing device or system, cause the computing device or system to perform the method of any one of claims 10 to 18.

20. A computer readable medium storing a computer program having instructions which, when executed by a computing device or system, cause the computing device or system to perform the method of any one of claims 10 to 18.