aircraft, and potentially also other input parameters, and, based on the parameters, make a decision whether to allow docking or not. Based on the decision, information is shown on a display at the stand in clear view of the pilot, instructing the pilot of which action to take.

Aircraft docking systems are known in the art.

As an example, WO 01/35327 Al discloses an aircraft identification and docking guidance system utilizing a laser range finder (LRF) to identify an aircraft approaching a gate. The LRF is directed at the aircraft, and from the 5 echoes, a profile is derived and compared to known profiles.

As another example, US 2008/157947 Al discloses a radio frequency identification (RFID) tag-based system and method for guiding an aircraft to a stopping position. RFID tags are typically disposed in the ground and may be sensed by an RFID sensor disposed on the aircraft.

As yet another example, EP 3 222 529 Al discloses an aircraft docking system comprising a light based verification and positioning system adapted to scan a volume in connection to a stand, wherein the light based verification and positioning system is further adapted to control the extension of the scanned volume based on the received surveillance data.

A problem with known methods and systems is that they are not adapted to handle the larger aircrafts of increasing importance today. Even if the physical dimensions of the aircrafts would fit the stand, the aircraft docking systems, and the methods implemented therein are not adapted to handle the docking in a correct way which may lead to high degree of interruptions during docking, or even accidents.

Summary

It is an object to mitigate, alleviate or eliminate one or more of the above-identified deficiencies in the art and disadvantages singly or in any combination and solve at least the above mentioned problem.

According to a first aspect there is provided a method implemented in an aircraft docking system for guiding a pilot of an approaching aircraft to a stop position at a stand, wherein the aircraft docking system comprises a position monitoring system, a control unit, and a display, said method comprising:

the position monitoring system monitoring a position of the approaching aircraft within a volume at the stand, wherein said volume has a longitudinal extension along an approach direction towards an expected entrance position of the aircraft,

the control unit comparing said monitored position with a first area, said first area enclosing the stop position and extending along the approach direction to define a front boundary facing the approaching aircraft,

the control unit comparing said monitored position with a subsection of the first area, said subsection enclosing the stop position and extending along the approach direction to meet a portion of the front boundary of the first area,

if said monitored position is inside said subsection of the first area: