



## PATENTS ACT 1977

APPLICANT                      Borealis Technical Limited

ISSUE                          Whether patent application GB2118985.7 complies  
with the requirements of sections 1(1)(d) and 1(2)(c)

HEARING OFFICER              B Micklewright

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### DECISION

#### Introduction

- 1 Patent application number GB2118985.7 was filed on 24 December 2021 in the name of Borealis Technical Limited, with a declared priority date of 29 December 2020. It was published on 14 September 2022 as GB2604712 A.
- 2 The examiner considered the invention to relate to a method of doing business as such and thus be excluded from patentability under sections 1(1)(d) and 1(2)(c) of the Patents Act 1977 (“the Act”). The applicant disagreed and the matter was therefore referred to myself for a decision based on the papers on file. I confirm that, in reaching my decision, I have considered all the correspondence on file.
- 3 At this point, only a partial search has been carried out by the examiner, and all other matters, including novelty and inventive step, have been deferred. If therefore the claimed invention was found not to be excluded from patentability, the application would need to be referred back to the examiner for completion of the search and examination.

#### The invention

- 4 The invention, illustrated in Figures 1A and 1B below, relates to a method for safely facilitating the parking and docking of aircraft equipped with an electric taxi drive system. In particular, the method involves connecting front and rear aircraft doors 22,24 to extendible passenger bridges 18,20 at an airport terminal parking location in a manner that reduces the time the aircraft needs to spend on the ground. The bridges are extended before the aircraft is parked. The aircraft is manoeuvred using the electric taxi drive system, controllable by the pilot, to park parallel to the terminal such that the aircraft’s front and rear doors are substantially aligned with the aircraft connection ends of the first and second bridges respectively. The bridges are placed

in a position such that the second bridge avoids contact with the aircraft's wing and horizontal stabilizer whilst it is manoeuvring into its position. Once the aircraft is parked, the bridges are adjusted such that they are fully aligned with and connected to their respective aircraft doors.

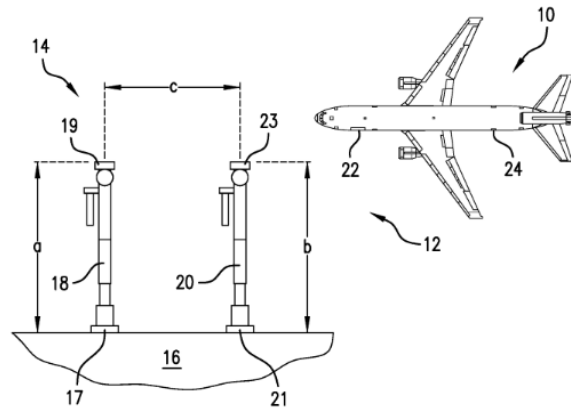


FIG. 1A

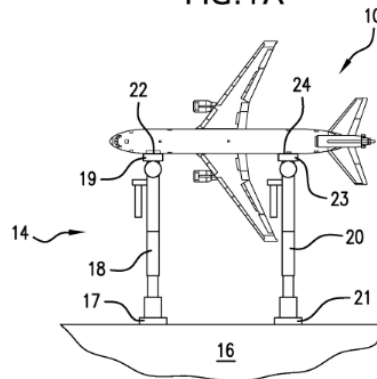


FIG. 1B

5 The latest claims were filed on 16 October 2023. Claim 1 is the only independent claim and reads:

1. A method for safely facilitating the parking and docking of electric taxi drive system-equipped aircraft maneuvered within an airport ramp area to park in parallel orientations at airport terminal parking locations equipped with at least two extendible and retractable passenger loading bridges positionable to safely facilitate parking and docking the electric taxi drive system-equipped aircraft at designated equipped airport terminal parking locations, comprising:

a. providing, at an airport terminal building, parking locations for aircraft equipped and maneuverable with landing gear wheel-mounted electric taxi drive systems, each parking location being equipped with at least two laterally extendible and retractable passenger loading bridges, each passenger loading bridge being connected to the airport terminal building by a terminal connection end and connectable by an opposed aircraft connection end to a front door or a rear door spaced a distance from the front door on a terminal-facing side of an electric taxi drive system-equipped aircraft parked and docked in a parallel orientation, wherein each passenger loading bridge is operable to move laterally between the airport terminal building and the terminal-facing side of the electric taxi drive system-equipped aircraft and at least a passenger loading bridge connectable to a rear

electric taxi drive system-equipped aircraft door is further operable to move a vertical distance above a ramp ground surface;

b. before an electric taxi drive system-equipped aircraft arrives at a designated equipped parking location, laterally extending the aircraft connection end of a first passenger loading bridge connectable to an aircraft front door a determined front lateral distance from the airport terminal building, laterally extending the aircraft connection of a second passenger loading bridge connectable to an aircraft rear door, moving the second passenger loading bridge vertically above a ramp ground surface and maintaining the second passenger loading bridge at a vertical distance that avoids contact between the second passenger loading bridge and a wing and a horizontal stabilizer on an electric taxi drive system-equipped aircraft being driven into the designated equipped parking location, and pre-positioning the aircraft connection ends of the first and second passenger loading bridges at determined front and rear lateral distances from the airport terminal building and the second passenger loading bridge at the vertical distance;

c. driving an electric taxi drive system-equipped aircraft with the electric taxi drive systems through the airport ramp area toward the designated equipped parking location with the pre-positioned first passenger loading bridge and the pre-positioned second passenger loading bridge, maneuvering the electric taxi drive system-equipped aircraft with the electric taxi drive systems into a parallel orientation at the designated equipped parking location adjacent to the pre-positioned passenger loading bridges, and avoiding contact between the electric taxi drive system-equipped aircraft terminal-facing wing and horizontal stabilizer and the laterally extended first and second passenger loading bridges while the aircraft is maneuvered into the parallel orientation with aircraft front door positioned to be aligned with the laterally extended first passenger loading bridge and the aircraft rear door positioned to be aligned with the laterally extended and vertically positioned second passenger loading bridge; and

d. moving the aircraft connection ends of the pre-positioned first and second passenger loading bridges laterally and vertically as required to completely align the pre-positioned first passenger loading bridge with the aircraft front door and the prepositioned second passenger loading bridge with the aircraft rear door, connecting the fully aligned first and second passenger loading bridges to the respective aircraft front and rear doors, and establishing passenger transfer connections between the electric taxi drive system-equipped aircraft and the airport terminal building.

## The law

6 Section 1(2) of the Act states:

*It is hereby declared that the following (among other things) are not inventions for the purposes of this Act, that is to say, anything which consists of—*

...

*(c) A scheme, rule or method for performing a mental act, playing a game or doing business, or a program for a computer;*

...

*but the foregoing provision shall prevent anything from being treated as an invention for the purposes of this Act only to the extent that a patent or application for a patent relates to that thing as such.*

7 The provisions of section 1(2) were considered by the Court of Appeal in *Aerotel*<sup>1</sup> where a four-step test was set out to decide whether a claimed invention was excluded from patent protection:

(1) *Properly construe the claim;*

(2) *Identify the actual contribution;*

(3) *Ask whether it falls solely within the excluded subject matter;*

(4) *Check whether the actual or alleged contribution is actually technical in nature.*

8 It was stated by Jacob LJ in *Aerotel* that the test is a re-formulation of and is consistent with the previous ‘technical effect approach with rider’ test established in previous UK case law. Kitchin LJ noted in *HTC v Apple*<sup>2</sup> that the *Aerotel* test is followed in order to address whether the invention makes a technical contribution to the art, with the rider that novel or inventive purely excluded matter does not count as a ‘technical contribution’.

### **Assessment**

9 I will use the *Aerotel* approach in my assessment.

*Step (1) properly construe the claim*

10 The construction of the term “parallel orientations at airport terminal parking locations” was considered by the examiner. The applicant submitted that it refers to “*orienting the aircraft with a longest axis parallel to a longitudinal extent of a terminal building*”, as is shown in the drawings. They proposed this construction in order to distinguish the present invention from arrangements where aircraft dock parallel to permanent projections emanating from the main terminal (Munich airport is an example of such a configuration.) For the purposes of this decision I will accept the construction proposed by the applicant.

11 According to page 8 of the Description, “wheel-mounted electric taxi drive systems” are pilot-controllable landing gear wheel-mounted drive systems for driving aircraft without reliance on power from the aircraft’s main engines, or from tow vehicles.

12 Although the claim is rather verbose, it does not pose any further construction issues.

*Step (2) identify the actual contribution*

13 The invention has not yet been fully searched so I will identify the alleged contribution rather than the actual contribution. Identifying the contribution in the second step of this test is critical and I refer to paragraph 43 of *Aerotel* for guidance:

*“The second step – identifying the contribution – is said to be more problematical. How do you assess the contribution? Mr Birss submits the test is workable – it is an exercise in judgement probably involving the problem said to be solved, how the*

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<sup>1</sup> *Aerotel Ltd v Telco Holdings Ltd and Macrossan’s Application* [2006] EWCA Civ 1371

<sup>2</sup> *HTC Europe Co Ltd v Apple Inc* [2013] EWCA Civ 451

*invention works, what its advantages are. What has the inventor really added to human knowledge perhaps best sums up the exercise. The formulation involves looking at the substance not form – which is surely what the legislator intended.”*

- 14 In their pre-hearing report of 11 December 2023 the examiner considered the contribution to be:

*“A method of connecting front and rear doors of an aircraft with two extendible passenger bridges at an airport terminal parking location, the method comprising extending aircraft connection ends of first and second bridges laterally outwardly to determined distances from the terminal and moving the second bridge to a vertical position which avoids contact of the second bridge with a wing and horizontal stabilizer of the aircraft, next manoeuvring the aircraft using an electric taxi drive system to park parallel to the terminal at the parking location such that the aircraft’s front and rear doors are substantially aligned with the aircraft connection ends of the first and second bridges respectively whilst avoiding contact of the second bridge with a wing and horizontal stabilizer of the aircraft, then adjusting each bridge such that they are fully aligned with the respective doors, and finally connecting the bridges to the respective aircraft doors.”*

- 15 The applicant, in their letter of 16 October 2023, highlighted features of the claim that should be considered to be part of the contribution. They stated that aircraft equipped with electric taxi drive systems must also be capable of manoeuvring into a position adjacent to passenger loading bridges that initially enables rough alignment and then full alignment and connection with the aircraft front and rear doors. They also stated that additional aspects of the contribution are discussed in what follows in their letter. These further aspects are however not clearly identified in the correspondence, and I cannot find any features referred to which are not already included in the contribution identified by the examiner.

- 16 Taking into account the applicant’s comments and the stated advantages of the invention, I take the contribution to be:

A method of connecting front and rear doors of an aircraft with two extendible passenger bridges at an airport terminal parking location, the method comprising extending aircraft connection ends of first and second bridges laterally outwardly to determined distances from the terminal and moving the second bridge to a vertical position which avoids contact of the second bridge with a wing and horizontal stabilizer of the aircraft, next manoeuvring the aircraft using an electric taxi drive system to park parallel to the terminal at the parking location such that the aircraft’s front and rear doors are substantially aligned with the aircraft connection ends of the first and second bridges respectively whilst avoiding contact of the second bridge with a wing and horizontal stabilizer of the aircraft, then adjusting each bridge such that they are fully aligned with the respective doors, and finally connecting the bridges to the respective aircraft doors, thereby enabling the aircraft to be manoeuvred into a position adjacent to the passenger loading bridges that initially enables a rough alignment with the aircraft doors, followed by a full alignment and connection, providing for faster connecting and thus reducing the time the aircraft need be on the ground.

(3) Ask whether it falls solely within the excluded subject matter; (4) Check whether the actual or alleged contribution is actually technical in nature

17 For convenience I will consider steps (3) and (4) together.

18 In their letter of 16 October 2023 the applicant made the following submissions in relation to the third and fourth *Aerotel* steps:

*"While the claimed method may require less time to park and dock and electric taxi drive system-equipped aircraft, this method is not simply, as asserted, a logistical task or business method as contemplated by Merrill Lynch and its progeny. There are technical aspects of Applicant's method that must function cooperatively if any time saving is to be achieved. These include safely maneuvering passenger loading bridges a determined lateral distance outwardly of the airport terminal building into the ramp area, as well as a vertical distance, at a parking location that, at most airports, is likely to be congested with aircraft, ground service vehicles, equipment, and ground personnel so that the aircraft connection ends are laterally and vertically positioned in locations that will enable alignment and connection with at least two aircraft doors on the only kind of aircraft, one equipped with electric taxi drive systems, capable of maneuvering into a parallel position at the parking location with terminal-facing doors adjacent to and roughly aligned with the extended passenger loading bridges."*

19 Moreover the applicant argues that the passenger bridges are technical features that contribute to the inventive method.

20 I have found that the contribution in the present case does not include new apparatus that enables the method. Rather, standard airport terminal elements (the electric taxi drive-equipped aircraft, the manoeuvrable and adjustable passenger loading bridges) are arranged in a manner such as to reduce the time taken to dock the aircraft. The contribution lies in the decision to manoeuvre the passenger loading bridges in advance of the aircraft arriving at the parking location in a manner such that contact with the wings and horizontal stabilisers of the aircraft is avoided whilst the aircraft manoeuvres into the parking location, and then carrying out minor adjustments to align and connect the passenger bridges to the aircraft doors.

21 It is well established that the business method exclusion encompasses administrative, organisational and managerial activities as well as financial or commercial activities. For example, in *Aerotel/Macrossan* it was noted that the idea of having three document trays, labelled "in", "out" and "too difficult", was a way of conducting business and no more. In *Merrill Lynch's Application*<sup>3</sup> Fox LJ rejected a claim to a computerised system for making a trading market, stating at page 559:

*"Now let it be supposed that claim 1 can be regarded as producing a new result in the form of a technical contribution to the prior art. That result, whatever the technical advance may be, is simply the production of a trading system. It is a data-processing system for doing a specific business, that is to say, making a trading market in securities. The end result, therefore, is simply "a method of doing business", and is excluded by section 1(2)(c). The fact that the method of doing business may be an improvement on previous methods of doing business does not seem to me to be material. The prohibition in section 1(2)(c) is generic; qualitative considerations do*

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<sup>3</sup> *Merrill Lynch's Application* [1989] RPC 561

*not enter into the matter. The section draws no distinction between the method by which the mode of doing business is achieved. If what is produced in the end is itself an item excluded from patentability by section 1(2), the matter can go no further.”*

- 22 Thus a method of doing business is excluded as a method of doing business, even if it is an improvement on previous methods of doing business; qualitative considerations do not enter into the matter. The applicant argued that precedent cases such as *Merrill Lynch* relate to computer-implemented inventions, whilst the present invention is not implemented on a computer. Whilst that may be the case, *Merrill Lynch* considers the business method exclusion more broadly and is of relevance to the present case.
- 23 In their letter of 11 December 2023 The examiner referred to IPO decision BL O/867/21<sup>4</sup> concerning an application in the name of the present applicant, in which the hearing officer found the invention to be excluded as a method of doing business as such. Whilst this case does have some similarities with the present invention in that it involved manoeuvring first and second loading bridges in order to transfer passengers between an airport terminal and an aircraft, and I note that the hearing officer considered the invention to be excluded from patentability despite finding that the contribution included steps involving the passenger loading bridges, the invention is not the same as that of the present invention and this decision does not assist me in deciding the present case.
- 24 The present invention relates to an improved method of docking an aircraft at an aircraft terminal. At its core, it relates to a decision to minimise the time that an aircraft is on the ground, by moving the passenger loading bridges roughly into position before the aircraft docks, so that only minimal adjustments need to be made after docking. The method does not involve any technical improvements to the equipment used for docking aircraft. Rather the method is improved because the docking process is organised in a different manner. I do not agree with the applicant that “safely maneuvering passenger loading bridges a determined lateral distance outwardly of the airport terminal building into the ramp area, as well as a vertical distance, at a parking location ... so that the aircraft connection ends are laterally and vertically positioned in locations that will enable alignment and connection with at least two aircraft doors” is a technical feature of the contribution. Rather it refers to the way the passenger loading bridges and aircraft taxiing are organised in order to reduce docking time. Thus this is an improvement to an organisational or administrative activity to achieve the organisational objective of enabling the aircraft to dock more quickly so that it can spend less time on the ground. This is an administrative problem with an administrative solution and therefore falls within the business method exclusion.
- 25 In their letter of 16 October 2023 the applicant requested that the examiner give the applicant the benefit of the doubt, as discussed by the hearing officer in *Landmark Graphics* (BL O/112/18.)<sup>5</sup> In that case, the hearing officer considered whether the applicant should be given the benefit of the doubt in cases involving excluded subject matter. He concluded that it was appropriate to do so when there was substantial doubt as to whether the invention in question was excluded from

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<sup>4</sup> *Borealis Technical Limited's Application* (BL O/867/21)

<sup>5</sup> *Landmarks Graphis Corporation's Application* (BL O/112/18)

patentability, following comments made by Mann J in *Macrossan's Application*<sup>6</sup>. In the present case I do not have such substantial doubt as to whether the invention is excluded from patentability and thus it is not appropriate to give the benefit of the doubt to the applicant.

- 26 I therefore conclude that the contribution made by claim 1 of the present invention lies wholly in the excluded field of a method of doing business as such.

### **Conclusion**

- 27 I have found that the invention claimed in claim 1 relates solely to a method of doing business as such and is therefore excluded from patentability under sections 1(1)(d) and 1(2)(c) of the Act. I therefore refuse the application under section 18(3).

### **Appeal**

- 28 Any appeal must be lodged within 28 days after the date of this decision.

### **B MICKLEWRIGHT**

Deputy Director, acting for the Comptroller

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<sup>6</sup> *Macrossan v Comptroller-General of Patents* [2006] EWHC 705 (Ch)