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**Datasheet for the decision
of 6 October 2011**

Case Number: T 2312/08 - 3.2.01

Application Number: 02751416.5

Publication Number: 1417113

IPC: B60N 2/34

Language of the proceedings: EN

Title of invention:

A seating system and a passenger accomodation unit for a vehicle

Patentee:

Virgin Atlantic Airways Limited

Opponent:

Premium Aircraft Interiors UK Limited

Headword:

-

Relevant legal provisions:

EPC Art. 56

Relevant legal provisions (EPC 1973):

EPC Art. 83, 56

Keyword:

"Sufficiency of disclosure (yes)"
"Novelty (yes)"
"Inventive step (yes)"

Decisions cited:

-

Catchword:

-



Case Number: T 2312/08 - 3.2.01

DECISION
of the Technical Board of Appeal 3.2.01
of 6 October 2011

Appellant: Premium Aircraft Interiors UK Limited
(Opponent) Kestral House
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Respondent: Virgin Atlantic Airways Limited
(Patent Proprietor) The Office
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Representative: Brown, Fraser Gregory James
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 17 October 2008
rejecting the opposition filed against European
patent No. 1417113 pursuant to Article 101(2)
EPC.

Composition of the Board:

Chairman: G. Pricolo
Members: C. Narcisi
S. Hoffmann

Summary of Facts and Submissions

- I. The opposition filed against European patent No. 1 417 113 was rejected by the decision of the Opposition Division posted on 17 October 2008. Against this decision an appeal was filed on 12 December 2008 and the appeal fee was paid. The statement of grounds of appeal was filed on 17 February 2009.
- II. Oral proceedings were held on 6 October 2011. The Appellant (Opponent) requested that the decision be set aside and the patent be revoked. The Respondent (Patentee) requested that the appeal be dismissed. The Respondent withdrew his request for admitting the documents filed on 26 September 2011 into the appeal proceedings.

Granted claim 1 reads as follows:

"A passenger accommodation unit for a vehicle, particularly an aircraft, which is adapted to provide self-contained, individual seating and sleeping accommodation for a passenger, said accommodation unit comprising:

supporting structure (42) for supporting said unit off the floor of a vehicle; one or more movable passenger-bearing, structural components (71,72); and means for connecting said movable, structural components to said structure such that said components can be selectively moved between a seat configuration, in which a plurality of passenger-bearing surfaces on said one or more structural, movable components or said supporting structure form a seat for the passenger, and a bed configuration, in which a plurality of said bearing

surfaces (47,48,67,74,76) are disposed substantially coplanarly and substantially contiguously to form a bed for the passenger;

characterised in that at least one of said movable components is double-sided, comprising first and second opposite sides, one of said sides having a first seat surface (73) that forms part of the seat in said seat configuration, and the other side having a second bed surface (74) that forms part of said bed in said bed configuration, said at least one double-sided movable component being a back-rest component (72) that is connected to said supporting structure (42) such that it can be selectively pivoted between a first generally upright position, in which said first surface is arranged to form part of said seat, and a second prone position in which said second surface is arranged to form part of said bed, and wherein one or more of said passenger-bearing surfaces comprise a bed extension surface (47), which bed extension is positioned or deployable to be positioned rearwardly of the seat to form part of said bed in said bed configuration."

Granted claim 13 reads as follows:

"A passenger seat assembly for a passenger vehicle, particularly an aircraft, which assembly is adapted to provide seating and sleeping accommodation for a passenger, said assembly comprising:

supporting structure (42) adapted for supporting the assembly off the floor of the vehicle; a plurality of seat elements including a seat-pan element (71) and a back-rest element (72), said back-rest element comprising first and second opposite sides, one of said sides having a first seat surface (73) and the other

side having a substantially flat second bed surface (74); a seat movement mechanism (220) adapted for connecting the seat elements to the supporting structure, said seat movement mechanism including a seat conversion sub-mechanism adapted to allow and control movement of the seat elements such that the seat elements can be selectively moved between a seat configuration and a bed configuration; and characterized in that one or more auxiliary accommodation elements connected to or forming part of said supporting structure and being positioned or being deployable to be positioned juxtaposed said seat, the or each auxiliary accommodation element having an auxiliary, substantially flat, passenger-bearing surface (47,48,67,76); said seat conversion sub-mechanism being adapted for controlling movement of the back-rest element such that said back-rest element is pivotable from a first upright position in the seat configuration, in which said first seat surface (73) of the back-rest element (72) cooperates with said seat-pan element (71) to form a seat for the passenger, to a second prone position in the bed configuration, in which the second bed surface (74) of the back-rest element (72) cooperates with one or more of said auxiliary passenger-bearing surfaces (47,48,67,76) to form a substantially coplanar, continuous extended bed surface for the passenger, one or more of said auxiliary accommodation elements forming the extended bed surface being positioned or being deployable to be positioned rearwardly of the seat."

III. The Appellant's submissions may be summarized as follows:

The subject-matter of claim 1 in conjunction with the patent specification of the contested patent (hereinafter designated as EP-B1) do not allow the skilled person to carry out the invention throughout the full scope of the claims. According to paragraphs [0012] and [0014] of EP-B1, it is one of the objectives of the invention to provide an improved passenger accommodation which incorporates a flat sleeping surface of maximal length and preferably also maximal width. However, the contested patent does not provide any teaching of how these specific advantages should be achieved. The independent claims of EP-B1 are very broad in scope and according to the case law of the Boards of appeal a broad claim requires in general the disclosure of a number of alternatives over the range of the claims (see e.g. T 435/91). In particular in EP-B1 there is no disclosure of a sleeping surface of maximal length and preferably maximal width as encompassed by the scope of claim 1.

The subject-matter of claim 1 is not new over the disclosure of TD7 (Excerpt from Wikipedia "Peugeot 505" 1978-1992) or TD8 (Article "Citroën DS" (1955-1976), by Malcolm Bobbitt, Veloce Publishing). The photographs shown therein illustrate third row seats in a seat configuration, and different stages of sequential steps, by which the back-rest component of the third row seat is rotated forwardly to a horizontal position and a sleeping berth corresponding to a bed configuration of the seat is obtained. In this bed configuration the outward surface of the back-rest

component of the seat thus becomes a bed surface. The bed configuration obtained is evidently "self-contained", for this term only requires said bed configuration to be put into effect in a well-defined and limited space which does not necessarily have to be a closed space. Hence, the carpeted luggage surface behind the third row seat is undoubtedly to be considered as a bed extension surface within the meaning of the invention. Further, the definition of supporting structure given in the claim is vague and unclear such that this structure may be construed to imply the pivot brackets at the front of the seat or any other element fulfilling the indicated purpose of keeping the seat unit off the floor of the vehicle. Finally, in the bed configuration the location of the passenger-bearing surfaces is not defined by the wording of claim 1. Therefore, in the bed configuration these passenger-bearing surfaces, and the bed extension surface constituting part of said passenger-bearing surfaces, do not need to be provided on the supporting structure or on said structural, movable components but may also be provided elsewhere. Consequently, no difference to the disclosure of TD7 (or TD8) is to be noted.

In any case, the subject-matter of claim 1 does not involve an inventive step in view of TD7 (or TD8) either considered alone or in combination with D2 (GB-A-2 326 824) (or D4 (DE-U1-297 02 660)), or vice versa in view of D2 in combination with TD7 (or TD8). In particular, the skilled person starting from D2 as closest prior art would look for an alternative solution to the problem of providing a self-contained seat unit which includes a bed configuration. The

skilled person would recognize that rotation of the back-rest component in a forward direction would be the obvious alternative to the solution shown in D2, where the back-rest component of the seat is reclined in a backward direction. This alternative arrangement is obviously likewise suggested by TD7 (or TD8). Moreover, D2 already discloses that the space behind the seat is used as a bed surface (in the bed configuration of the seat) and the skilled person would be led in an obvious manner in view of TD7 to use the space and the supporting structure located behind the back-rest component of the seat unit shown in D2 for providing a bed extension surface.

Conversely, starting from TD7 (or TD8) the skilled person would provide in view of D2, as an obvious alternative to the seat unit of TD7, an additional supporting structure for the seat unit, keeping the seat unit off the floor. The skilled person would thus necessarily arrive at a bed extension surface which would not any more be provided on the floor of the luggage space behind the third row seat, as shown in TD7, but instead on the supporting structure itself. The subject-matter of claim 1 therefore lacks an inventive step. Considering TD7 (or TD8) alone the skilled person would similarly arrive in an obvious manner to the claimed subject-matter since the use of the outward surface of the back-rest seat component is known from TD7 (and is anyway suggested by D4) and the use of a supporting structure for the seat is generally known to the skilled person.

The same arguments as put forward against claim 1, or corresponding arguments, likewise apply to claim 13

whose subject-matter comprises mechanical elements entirely equivalent to those of claim 1.

IV. The Respondent's submissions may be summarized as follows:

The invention is sufficiently disclosed because the disclosure of the patent specification, taken as a whole, includes sufficient information for a skilled person to practise the invention without difficulties.

The subject-matter of claim 1 is new over TD7 and TD8 since several features of the claim are not disclosed by this prior art. In the first place, these documents do not show a passenger accommodation unit "adapted to provide self-contained, individual seating and sleeping accommodation for a passenger" since a carpeted luggage surface cannot be regarded as constituting part of a self-contained accommodation, let alone be adapted to provide a sleeping accommodation for a passenger. Further, the bed extension surface is defined according to claim 1 as being provided on said passenger-bearing surfaces which are formed either on the supporting structure or on the structural movable components. However, the carpeted floor or carpeted luggage surface illustrated in TD7 or TD8 manifestly is not formed on the above mentioned or equivalent constructional parts and therefore these documents do not disclose the bed extension surface which is clearly and unambiguously defined by claim 1. Finally it is also generally noted that the evidence of TD7 is vague, some of the constructional parts allegedly identified by the Appellant in the photographs of TD7 (or TD8), e.g. pivot brackets at the front of the seat, being not

unmistakably visible in these photographs. For the mentioned reasons the subject-matter of claim 1 is new over TD7 (and TD8).

The subject-matter of claim 1 involves an inventive step over the cited prior art. The skilled person starting from TD7 (or TD8) would not be able to arrive at the subject-matter of claim 1 other than with the benefit of hindsight. In particular, there is no suggestion in any of documents TD7 (or TD8), D2 or D4 of providing a self-contained accommodation unit having the features of claim 1. Alternatively, the skilled person starting from D2 as closest prior art again would find no suggestion in the available prior art to provide a bed extension surface as defined in claim 1. According to D2, the space rearwardly of the seat is occupied in the bed configuration by the bed surface formed by the surface of the backwardly reclined backrest component of the seat. Similarly, neither TD7 nor D4 give any hint or indication that a bed extension surface formed in accordance with claim 1 may be used. All in all, in view of the above the subject-matter of claim 1 is not made obvious by the cited prior art.

Reasons for the Decision

1. The appeal is admissible.

2. The subject-matter of claim 1 and the disclosure of the patent specification meet the requirements of Art. 83 EPC 1973. The Appellant's contention that the disclosure of the patent falls short of indicating a solution to the object of providing a passenger

accommodation "which incorporates a flat sleeping surface of maximal length and preferably also of maximal width" (EP-B1, paragraph [0012]) and therefore fails to comply with the mentioned requirements of the law is unfounded. Firstly, the mentioned object is evidently of a relative nature and it has to be construed necessarily by common sense as to mean that said sleeping surface of maximal length (and preferably maximal width) is provided through optimum use of the given cabin space available to a single person accommodation, which cabin space results from the chosen overall number of seat units and their disposition in the passenger cabin. The solution according to claim 1 achieves this object, given that by means of the bed extension surface optimal use is made of the space behind the seat immediately proximate and contiguous to the neighbouring seats and to the fuselage's sidewalls. Secondly, and most importantly, the mentioned object is not included in the wording of claim 1, which is formulated clearly in terms of structural and constructional components such that its subject-matter can be carried out without any difficulty by the skilled person.

3. The subject-matter of claim 1 is new over TD7 (or TD8) since on a reasonable assessment of the wording of claim 1 the Appellant's allegations, which are essentially based on lack of clarity of claim 1 and on the consequent lack of novelty, are unfounded. The claim gives an unambiguous definition of passenger-bearing surfaces, by the wording "passenger-bearing surfaces on said one or more structural, movable components or said supporting structure" and quite independently thereof it gives in the same sentence a

definition of seat configuration, by the wording "a seat configuration, in which a plurality of passenger-bearing surfaces (on said one or more structural, movable components or said supporting structure) form a bed for the passenger". Thus the wording allows a clear distinction to be made between a definition of "seat configuration" (seat configuration with a plurality of passenger-bearing surfaces) on the one hand, and a more general definition of passenger-bearing surfaces (including the passenger-bearing surfaces of the seat configuration and also those of the bed configuration) on the other hand. Moreover, the fact that the passenger-bearing surfaces must be provided by the structural components that form both the seat and the bed configuration, whereby, depending on their disposition, the latter provide the passenger-bearing surfaces for the seat configuration or for the bed configuration, respectively, can already be inferred from the fact that the accommodation unit is self-contained and that beyond the supporting-structure and the "movable passenger-bearing, structural components" defined in the preamble of the claim no other constructional element is mentioned in the claim which is apt to include a passenger-bearing surface. As a consequence, the further features of the claim reciting "a bed configuration, in which a plurality of said bearing surfaces are disposed.." and "wherein one or more of said passenger-bearing surfaces comprise a bed extension surface.." necessarily refer to the previously defined "passenger-bearing surfaces". From the above it follows that the floor of the luggage space behind the third row seat cannot be seen as providing a bed extension surface within the meaning of claim 1 since it is not formed by passenger-bearing

surfaces which are disposed on one or more structural movable components or on the supporting structure of the seat accommodation unit. Accordingly, the subject-matter of claim 1 is new over TD7 (or TD8), given that no bed extension surface formed on a passenger-bearing surface according to the mentioned definition of claim 1 is disclosed in TD7 (or TD8) (Art. 54 (2) EPC).

4. The subject-matter of claim 1 involves an inventive step in view of D2 and the further cited prior art TD7 (TD8) and D4. The skilled person starting from D2 would not have any incentive or any reason to modify the passenger accommodation unit disclosed therein such as to arrive at the claimed invention. It is accepted that the skilled person would know about the possibility of providing alternative accommodation units having differing dispositions of their constructional elements in their respective bed configurations, such as for instance dispositions including the use of the outward surface of the back-rest component of the seat as a bed surface. This is shown in TD7 or in D4. Nevertheless, the passenger accommodation unit of D2 does not give any hints in this direction, nor does it identify or suggest any problems arising in connection with the disclosed accommodation unit which might lead the skilled person to contemplate the use of a substantially different bed configuration, such as for instance that implied by granted claim 1. The accommodation unit of D2, as is particularly obvious from figures 9 to 11, implies a very specific arrangement of the supporting structure (reference sign 2) and the movable structure components (reference signs 42-44) of the seat unit, tailored to optimize the bed surface by using the full length which is maximally

available to a single passenger's accommodation unit. Evidently, it is only through major and substantial modifications that the skilled person could arrive from the arrangement of the accommodation unit according to D2 to that according to the invention. In particular, figures 9 to 11 of D2 show very clearly that the supporting structure (2) of the seat unit is not apt for use as a bed extension surface, for it is not coplanar with the bed surface and not sized accordingly, and if the back-rest component of the seat were to be rotated forwardly its outward surface would not form a bed surface coplanar with the supporting structure on which the bed extension surface is disposed. Moreover, the accommodation unit of D2 has a movable supporting structure (see figures 9 to 11), which is completely unnecessary in the arrangement of the present invention. Already from these considerations the only conclusion to be drawn is that non obvious modifications of the accommodation unit known from D2 would be required in order arrive at the subject-matter of claim 1. Yet the most important argument against the pleading of the Appellant rests on the fact that the skilled person would not even envisage to perform the mentioned modifications since no available prior art document shows or suggests that a bed extension surface, to be positioned or deployable rearwardly of the seat, is formed on said passenger-bearing surfaces as defined in claim 1. For these reasons, starting from D2 as the closest prior art, the subject-matter of claim 1 would not be obvious for the skilled person even taking into account the further cited documents TD7 (or TD8) and D4.

Conversely, the skilled person starting from TD7 (or TD8) in conjunction with further documents D2 and D4

would not arrive in an obvious manner to the subject-matter of claim 1. TD7 discloses back-rest components of the third row seats in an automobile (Peugeot 505) which can be folded flat through forward rotational movement. This is done mainly in order to increase the carpeted luggage platform behind the seats. This already illustrates that the skilled person would have no incentive to modify this seating arrangement in the way implied by present claim 1. In fact, providing an intermediate supporting structure for supporting said seats off the floor and providing thereon, or on any movable passenger-bearing structure, a bed extension surface would lead to a considerably bulky and larger seat structure which would significantly reduce the amount of space in the luggage area of the vehicle and reduce the headroom available to passengers. This would evidently lead to a type of seat not suited for an automobile, as shown in TD7, and implementing these measures would run counter to the fundamental concept disclosed in TD7 of providing a spacious estate. Moreover, it has again to be emphasized that no disclosure, let alone any suggestion or hint, exists in the available prior art to modify any seat arrangement in a manner "wherein one or more of said passenger-bearing surfaces comprise a bed extension surface, which bed extension surface is positioned or deployable to be positioned rearwardly of the seat to form part of said bed in said bed configuration". The mentioned features are therefore not obvious for the skilled person.

In summary it is therefore concluded that the subject-matter of claim 1 involves an inventive step (Art. 56 EPC). The subject-matter of claim 13 likewise involves

an inventive step since its subject-matter, as also stated by the Appellant, comprises the same mechanical elements of claim 1 or mechanical elements entirely equivalent to those of claim 1. The same is true for the respective dependent claims which were not attacked by the Appellant.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

K. Boelicke

G. Pricolo