

**Internal distribution code:**

- (A) [ - ] Publication in OJ  
(B) [ - ] To Chairmen and Members  
(C) [ - ] To Chairmen  
(D) [ X ] No distribution

**Datasheet for the decision  
of 6 March 2019**

**Case Number:** T 1763/16 - 3.2.01

**Application Number:** 07760983.2

**Publication Number:** 2010030

**IPC:** B64D11/00

**Language of the proceedings:** EN

**Title of invention:**  
PASSENGER SEATING ARRANGEMENT

**Patent Proprietor:**  
BE Aerospace, Inc.

**Opponent:**  
Stelia Aerospace

**Headword:**

**Relevant legal provisions:**  
EPC Art. 54(1), 56, 100(a)

**Keyword:**  
Novelty - (yes)  
Inventive step - (yes)

**Decisions cited:**

**Catchword:**



**Beschwerdekammern**  
**Boards of Appeal**  
**Chambres de recours**

Boards of Appeal of the  
European Patent Office  
Richard-Reitzner-Allee 8  
85540 Haar  
GERMANY  
Tel. +49 (0)89 2399-0  
Fax +49 (0)89 2399-4465

Case Number: T 1763/16 - 3.2.01

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.01**  
**of 6 March 2019**

**Appellant:** BE Aerospace, Inc.  
(Patent Proprietor) 1400 Corporate Center Way  
Wellington, FL 33414 (US)

**Representative:** Peterreins Schley  
Patent- und Rechtsanwälte  
Hermann-Sack-Strasse 3  
80331 München (DE)

**Respondent:** Stelia Aerospace  
(Opponent) Zone Industrielle de l'Ancien Arsenal  
17300 Rochefort (FR)

**Representative:** Ipside  
7-9 Allées Haussmann  
33300 Bordeaux Cedex (FR)

**Decision under appeal:** **Decision of the Opposition Division of the  
European Patent Office posted on 30 May 2016  
revoking European patent No. 2010030 pursuant to  
Article 101(3) (b) EPC.**

**Composition of the Board:**

**Chairman** G. Pricolo  
**Members:** W. Marx  
S. Fernández de Córdoba

## Summary of Facts and Submissions

- I. The patent proprietor lodged an appeal against the decision of the opposition division revoking European patent No. 2 010 030.
- II. In its decision the opposition division held, *inter alia*, that claim 1 according to the auxiliary request 9 (identical to claim 1 as granted) lacked an inventive step having regard to the following document:
- D4: Excerpt from "Rumbold Component Maintenance Manual P10225-001", the cover page mentioning "United Airlines, First Class Cabin Assembly, Boeing 777, P10225-001, P10285-00"

Moreover, the following documents were filed with the notice of opposition or in opposition proceedings:

- D1: GB 2 362 095 A  
D2: WO 2004/083035 A1  
D3: WO 03/013903 A1  
D4-1: Internet citation "First Class Around The World Business Class Inflight Test" ([http://www.travelfirst.com/pays/united\\_airlines\\_e.html](http://www.travelfirst.com/pays/united_airlines_e.html))  
D4-2: Affidavit by Mr Tommy George Plant  
D5: WO 2005/014395 A1  
D6: EP 0 980 826 A2  
D7: US 5 716 026 A
- III. With its reply to the grounds of appeal, the respondent filed further documents D8 to D11:
- D8: "Component Maintenance Manual with Illustrated Parts List - 132-series - Pilot & copilot seat F900", 10 September 2004  
D9: Article "First revolution", reprinted from journal Aircraft Interiors International, September 2000

- D10: Excerpt from "ATA Specification 100 - Specification for Manufacturers' Technical Data", released 8 January 1999
- D11: Article "home front" from Aircraft Interiors International, March 2004

- IV. Oral proceedings before the board took place on 6 March 2019.

The appellant (patent proprietor) requested that the decision under appeal be set aside and that the patent be maintained according to the main request as filed with the grounds of appeal on 30 September 2016. The respondent (opponent) requested that the appeal be dismissed.

- V. Claim 1 according to the main request corresponds to claim 1 as granted and reads (broken into a feature analysis adopted by the parties) as follows:

An aircraft passenger seat assembly, comprising:

- (a) first and second seats (10A, 10B) selectively movable between upright and reclined positions and adapted for being positioned beside each other;
- (b) a center console (13) having a relatively wide aft end and a relatively narrow forward end for being positioned between the first and second seats;

characterised in that

- (c) the first and second seats are positioned at inwardly facing angles to each other and in that
- (d) the relatively wide aft end of the center console includes first and second foot wells (26A, 26B) therein adapted to permit the feet of passengers seated in aft-positioned first and second seats to extend therein when the aft-positioned first and second seats are in the recline position.

## Reasons for the Decision

### 1. *Claim construction*

1.1 The main issue of discussion concerned the center console including first and second foot wells therein as specified in features (b) and (d). The board's understanding of these features will therefore be given before assessing novelty and inventive step of the subject-matter of claim 1.

1.2 According to feature (b), the center console is a part which is positioned between two seats and has a relatively wide aft end and a relatively narrow forward end, i.e. has a trapezoidal shape and is delimited also in a direction perpendicular to a lateral direction where the seats are positioned. Feature (d) then specifies that "*the center console includes first and second foot wells therein*", which in the board's understanding means that a kind of recess must be present in the center console serving as a foot well. The foot well is further defined in feature (d) as being "*adapted to permit the feet of passengers seated in aft-positioned first and second seats to extend therein*", i.e. requires a certain amount of space provided in the center console in which the passengers' feet can extend.

1.3 The respondent argued that the term "console" used in the contested patent corresponded to a different structure than a "console" as defined in the dictionary Merriam-Webster ("*an architectural member projecting from a wall to form a bracket or from a keystone for ornament*"). The respondent therefore concluded that the term "console" had to be interpreted, in view of the

description and the figures of the patent, to mean a structural assembly provided between the two seats and forming a separation without any specific function other than the presence of the foot wells at the rear. Therefore, all physical aspects of the function were there even if the foot wells were attached at the aft end of the center console but between the seats. In particular, the article "a" used when introducing the center console in claim 1 did not provide any structural limitation. It did not define the structure of the object or how it was realised, e.g. implying a unitary character or a separate element as argued by the appellant. The term "a console" did not exclude that the console was the result of a juxtaposition of two demi-consoles, as in general the indefinite article could be used to describe an assembled object.

- 1.4 The board can follow the respondent in as far that feature (b) does not necessarily imply a unitary character or require a single-piece structure. However, it requires a substantially trapezoidal structural assembly positioned between two seats, which, as further specified in feature (d), includes foot wells therein. With a mind willing to understand, this means that the center console provides foot wells within this structural assembly and not at the rear or in a space behind the center console, as argued by the respondent. A flight passenger's foot well might not be limited to a space provided fully inside the center console and might extend also in the area behind. Nevertheless, the board cannot see any difficulty in delimiting the claimed subject-matter, as argued by the respondent. Claim 1 is directed to a passenger seat assembly comprising two seats and a center console including foot wells therein, i.e. only provides limitation with regard to the center console requiring a space provided

within the center console for accommodating the passenger's feet.

2. *Novelty (Article 54(1) EPC)*

2.1 The subject-matter of claim 1 of the main request is new over the available prior art (Article 54(1) EPC).

2.2 According to the respondent, what was claimed was an aggregation of features, as allegedly known e.g. from D1 (referring to page 16 ff of its letter of reply).

Document D1 shows (Figures 1B and 2) an arrangement of two recliners or seats positioned at inwardly facing angles in the center area of an aircraft (features (a) and (c)). D1 also show a trapezoidal structure between the two seats which might represent a center console as required by feature (c). A vertical partition wall of double-S-shape (viewed in lateral direction) is positioned at the aft end of this trapezoidal structure and separates the passenger compartments of different seat rows from each other. According to the respondent, this partition wall might be similar to shell 24 shown in the patent.

However, the board does not agree with the respondent that a space provided behind this vertical partition wall, which accommodates ottomans used for resting a passenger's feet, forms part of the center console as specified in feature (d) so that it was to be considered as a recess or space within the center console. The board follows the appellant's argument in this respect. Therefore, D1 therefore does not show a center console including foot wells "therein" (i.e. in the center console), as required by feature (d).



The term "foot well" is regarded as vague and susceptible of interpretation in the light of the patent specification, as acknowledged by the respondent, referring to paragraph [0041] and Figures 4 and 6 of the patent.

The board agrees with the respondent that the term "foot well" within the meaning of the patent describes a large rearwardly open space, in particular a higher opening than needed for placing a passenger's feet, and structurally a recess which has the function of a foot rest. However, as argued already above, feature (d) requires a recess within the center console. The board finds that at least part of the space which according to feature (d) is defined as "foot well" must be provided in the center console, which is not the case in D1. In D1, only a center console might be shown which is formed by a structure in front of a partition wall, and at best foot wells behind the partition wall. Thus, D1 fails to show a recess or space for placing the passenger's feet provided within a structural assembly which might be considered as center console.

2.3 According to the respondent, document D9 allegedly showed an arrangement of seats similar to D1. Therefore, with similar reasoning, the board finds that D9 does not disclose foot wells within the meaning of feature (d).

2.4 Similarly, the respondent identified in D2 (Figure 7) a seat assembly in which the seats were allegedly separated by a structure showing the geometrical characteristics of the center console of the patent, which included a space for the passengers sitting behind to extend their feet therein (as specified in claim 1). Foot wells including ottomans were an option which was only specified in dependent claim 7. As in

case of D1 and for the same reasons, the space behind the central console of D2 was allegedly to be considered as a "foot well" for the rear passengers (passengers seated side-by-side sharing a foot well was described in paragraph [0045] of the patent specification).

In the board's judgment, what can be derived from D2 (see Figure 7) is that a rear shell of the forward seats has an inward curve between the two seats and provides space behind for extending foot rests of the rearward seats therein. D2 does not teach that a structure, which could be considered as representing a center console, extends into this space behind the rear shell. However, a space situated behind a center console which might exist between the two forward seats does not yet form a recess within the center console. Therefore, with similar reasoning as above with regard to D1, D2 does not show feature (d).

2.5 As concerns document D3, the respondent refers to paragraph [0047] of the patent specification ("*the columns 46 may be rear facing*") and Figures 21A and 21B in D3, which were considered in the context of a seat arrangement as shown in Figure 1 in D3. Allegedly, a center console was known from Figure 1, which was also visible (reference signs 630 and 630') in Figures 21A and 21B showing a portion of a module of two seats, from which a trapezoidal shape according to feature (b) was inferable. In the sleeping position shown in Figure 21B, an ottoman represented a seat that was used as head rest for a passenger, and foot boxes (636') of the two seats of a seat assembly represented foot wells as required by feature (d).

The board concurs with the appellant that D3 explicitly states (page 47, lines 20 ff) that Figures 18 to 21 relate to "another embodiment", so features described in combination with this embodiment cannot be combined with features disclosed in combination with a previous embodiment described with reference to Figure 1 to construe a novelty attack. Moreover, the seat represented by an ottoman (pedestal 640 in D3, page 48, line 12) according to Figure 21B is not "*selectively movable between upright and reclined positions*", i.e. D3 fails to show a recliner as required by feature (a). D3 also fails to disclose directly and unambiguously that Figure 21B relates to a seat assembly of two seats arranged side-by-side which comprises foot boxes arranged side-by-side, as alleged by the respondent.

2.6 Even if document D4 should be regarded as prior art under Article 54(2) EPC, the board finds that D4 does not take away novelty of the subject-matter of claim 1.

The modular design of D4 shows (see Figure 3) separate front consoles for each seat for a center cabin layout, in which first and second seats are positioned at inwardly facing angles to each other as required by feature (c). A center console of trapezoidal shape as required by feature (b) might be disclosed in D4 when regarding the first and second personal stowage (together with the partition panel and the sliding screen between the two seats) as "a center console". Nevertheless, the board cannot see that the two individual consoles, allocated as separate components to each seat and comprising a footrest, could be considered as forming part of the center console, i.e. D4 fails to disclose foot wells of a center console used by passengers seated in aft-positioned first and second seats, as required by feature (d).

The respondent put into question the appellant's breakdown of parts, arguing that the contested patent did not deal with the issue of modularity and was silent as regards details on how the seat assembly was produced or installed in the aircraft cabin. Therefore, Figure 1 of D4 (page 2) allegedly showed an assembly of two seats separated by a central console (composed of two stowage units and two console units) comprising two separated foot wells as specified in claim 1.

However, the board follows the contested decision in that the term "a/the center console" as used in features (b) and (d) does not encompass an aggregation of four separate main components. In particular, there is no indication at all in D4 that the two individual consoles shown in D4 in front of the respective seats might be pre-assembled or associated with a center console of the two forward-positioned first and second seats, so that a center console including foot wells might be disclosed, as required by feature (d).

2.7 As a consequence, the board concludes that none of documents D1 to D4 or D9, which were cited by the respondent to argue lack of novelty, shows a center console positioned between first and second seats which includes first and second foot wells therein as required by feature (d).

3. *Inventive step (Article 56 EPC)*

3.1 The subject-matter of claim 1 involves an inventive step, having regard to any of documents D1, D2, D3, D4 and D9 cited by the respondent as representing a promising starting point (Article 56 EPC).

3.2 Irrespective of whether considering D1, D2, D3, D4 or D9 as the closest prior art, the subject-matter of claim 1 is distinguished from the prior art at least by feature (d) reciting that *"the relatively wide aft end of the center console includes first and second footwells therein adapted to permit the feet of the passengers seated in aft-positioned first and second seats to extend therein when the aft-positioned first and second second seats are in the recline position"*.

A seat assembly comprising feature (d) provides a good sleeping position while minimizing the cabin space consumed, i.e. serves the same purpose as already considered in the prior art (e.g. D4). So far, the board follows the respondent in that making better use of the available space was generally known and the target of all patents cited, independent from a modular or non-modular design of the center console.

The objective technical problem can therefore be regarded as how to provide an alternative aircraft passenger seat assembly that maximises usage of cabin space without compromising the passengers' comfort. The board agrees with the respondent that the invention as claimed does not necessarily concerns production or installation of the seat assembly.

3.3 Even following the respondent that the skilled person would combine documents of prior art to have a better result, such as D4 with D1, the board concurs with the appellant that there is no combination of prior art to arrive at the solution according to claim 1.

Moreover, the board does not agree with the respondent that the feature of having foot wells "therein" (in the center console) was only a small improvement for the

skilled person and not inventive for the skilled person without having to combine documents. The question to be answered is not whether the claimed subject-matter provides a significant improvement over the prior art, but whether it is obvious to the skilled person.

3.3.1 Starting from D1 as the closest prior art, the respondent saw the only structural difference of the subject-matter of claim 1 over D1 in a "plafond" formed in an upper portion of the foot well known from D1. In the absence of any specific meaning (form or function) assigned to the term "foot well" in the patent, the only function of the foot well was to permit the feet of the passengers to extend therein. The distinguishing feature was therefore a simple modification within the knowledge of the skilled person, who knew many examples of configurations in the prior art (such as Figures 19, 21B in D3; page 4, Figure 4 in D4; Figure 7 in D5; Figures 14a, 14b in D6; Figure 4 in D7; photo in D9).

However, as already discussed in detail with regard to novelty, feature (d) requires a recess provided within the center console. Providing a "plafond" in the area of the foot wells in D1, which is situated behind a vertical partition wall at the aft end of the center console, would still not provide a recess within the center console of D1. Therefore, the obvious modification proposed by the respondent would not lead to the subject-matter of claim 1. Moreover, D4 only teaches that foot wells are provided in two consoles positioned in front of respective aft-positioned seats which cannot be associated with a center console of the two forward-positioned seats, as argued already further above. It is also noted that documents D5 to D7 show seat assemblies in which the seats are positioned along the longitudinal axis of the fuselage, in which foot

wells of aft-positioned seats are provided in forward-positioned consoles, i.e. not more than D4.

3.3.2 Since the teaching of D9 corresponds to what is shown in D1, an attack on inventive step starting from D9 as the closest prior art has to fail for the same reasons as argued with respect to D1.

3.3.3 The respondent's argument with regard to D2 relies on the fact that D2 did not show a first and a second foot well, i.e. no physical separation between the foot well of D2, which allegedly was an obvious modification in view of e.g. document D1.

The respondent has failed to argue on the major difference of the subject-matter of claim 1 over D2, namely again a recess provided within the center console as required by feature (d), as discussed already with regard to D1. Therefore, for the same reasons, the subject-matter of claim 1 involves an inventive step over D2.

3.3.4 In arguing lack of an inventive step over D3, the respondent acknowledged that the auxiliary seat of D3 might not represent a seat within the meaning of the patent, i.e. a seat selectively movable between upright and reclined positions (or "recliner" as worded in D1).

However, the board cannot see that it would be obvious for the skilled person to replace the auxiliary seat as shown in Figure 21B by a recliner seat. This would mean that the main seat in D3 had to be removed, and the seating position of passengers would have to change from forward-facing to rear-facing, which is contrary to the teaching of D3 (see e.g. Figure 1; a rear-facing position is only exceptionally assumed when sleeping,

see Figure 21B) and for which there is no prompting in the prior art cited by the respondent.

- 3.3.5 Starting from document D4 as the closest prior art, the respondent again argued that the contested patent did not teach a unitary design of the center console and also lacked the aspect of manufacturing. Allegedly, the limitation of the subject-matter of claim 1 over the prior art was not sufficient, as the term "therein" only meant that something was "in" or "included".

As argued already further above, the board can follow the respondent in as far that the center console as specified in claim 1 does not necessarily require a unitary character or single-piece structure. However, two separate front consoles provided in front of two aft-positioned seats, as known from D4, do not fall under the claimed feature of "a center console", so that novelty over D4 had to be acknowledged. Moreover, according to the board's understanding of feature (d) given further above, the term "therein" has to be construed in the context it is used to specify the foot wells in feature (d), thus providing a clear limitation over the prior art which requires a space or recess provided within the center console for accommodating the passenger's feet.

The board has also difficulties in following the respondent's argument that the mere fact that nothing in D4 prevented the skilled person from realising a unitary central console already spoke against the inventiveness of the claimed subject-matter. In this regard, the respondent argued as follows:

- (a) Realising a seat assembly comprising a unitary center console, which could be pre-assembled, was typical for a modular design. Although D4 showed



different parts, it was not difficult for the skilled person to assemble them and put the final object in place in the aircraft.

- (b) It was possible to realise a unitary center console in the center part of the cabin. This choice was a simple alternative for the skilled person, who would consider other design options in case of a different cabin design (the 1+2+1 seat design known from D4 was not limiting).
- (c) Even if the modular design of D4 allowed usage of the same components for assemblies of two seats and for isolated seats, nothing prevented the skilled person from pre-assembling elements of the center console of seat assemblies. Realising more or less complex sub-assemblies was a general principle in industrial production.
- (d) When a non-unitary modular design of the center console in D4 permitted to position seats of the last row of seats against the bulkhead, it had to be concluded that the center console in the seat assembly of the contested patent was non-unitary (see Figure 12 of the patent). The rear part of the center console in the last seat row did not show a sub-assembly comprising foot wells, and the center console of the first seat row comprised foot wells without the front part of the center console. These general principles, well-known in industry, were also applied in the contested patent (Figure 12).
- (e) From the appellant's argument that "*a skilled artisan would understand that use of an integral, non-modular design would fundamentally change the seat layout shown in document D4*" it had to be concluded that the skilled person would have considered this design option. The mere fact that he had retained another option was not a criterion which justified an inventive step.

The respondent argued during oral proceedings that a "part" could be separated physically from other parts (as, allegedly, exclusively done by the appellant) and also functionally (such as a foot rest forming part of the back of a seat). However, even taking into account this argument, the board cannot see why the skilled person would be tempted to depart from the explicitly taught modular design comprising individual front consoles for each seat or cabin-pod as known from D4, and provide a foot rest as claimed, as argued by the respondent. There is no ground to assume a non-unitary modular design of the center console in the contested patent on the basis of Figure 12, as the only structure representing a center console in this figure looks alike for all rows of seats, i.e. there is no modified center console in the first or last seat row. In particular, there is nothing in D4 that would prompt the person skilled in the art to combine the two stowage units positioned between two seats (and that could be regarded as "a center console") and the two individual consoles positioned in front of the aft-positioned seats into one unitary center console as defined in claim 1. The question at stake is not whether such modification of the seat assembly of D4 is possible (according to typical or general principles of design of seat assemblies) and could be done, or that nothing prevented the skilled person from pre-assembling elements of the center console known from D4 and considering other design options, as argued by the respondent (see above (a)-(e)), but whether the skilled person would (not only could) be prompted to do so. Such prompting has not been convincingly argued by the respondent. Once an invention exists, it can often be argued that it was not difficult to make or a simple alternative to choose. However, such reasoning has to

be disregarded as it relies on an *ex post facto* analysis which draws on knowledge of the invention.

Therefore, the board was not convinced that the skilled person, starting from the disclosure of D4 and in view of his common general knowledge, would have arrived in an obvious manner at the subject-matter of claim 1. Moreover, even considering the teaching of documents D1 to D3, D5, D9 or D11, the subject-matter of claim 1 involves an inventive step over D4.

- D1 to D3 or D9 allegedly disclosed a unitary center console positioned between two seats as described in the patent. However, none of these documents shows a center console including first and second foot wells therein, as already discussed with respect to novelty. Therefore, the board cannot see how the teaching of D1/D9, D2 or D3 applied to the the seat assembly of D4 could teach feature (d) and lead to the subject-matter of claim 1.
- D5 might show (Figures 4, 7, 8, as referred to by the respondent) individual foot wells provided in consoles provided in front of respective seats, as already known from D4. However, D5 does not show a center console of trapezoidal shape having a relatively narrow forward end and a relatively wide aft end including first and second foot wells therein, adapted to permit the feet of passengers in aft-positioned first and second seats to extend therein, i.e. cannot lead to the claimed solution according to claim 1 either.
- D11 might show (see photos on pages 27 and 29, as referred to by the respondent) a unitary design of a center console of trapezoidal shape, but - as in case of D1 - at best foot rests at the rear end of this center console, which is not to be considered as a foot well or recess provided in the center

console, as required by feature (d). Therefore, also a combination of D4 with D11 cannot challenge inventive step of the subject-matter of claim 1.

4. In view of the above, it can be left open whether D4 was available to the public so that its disclosure pertains to the state of the art pursuant to Article 54(2) EPC, as contested by the appellant. Moreover, it can be left open whether documents D9 and D11 were filed late and should not be admitted, as argued by the appellant.

## Order

### For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance with the order to maintain the patent in the following version:
  - claims Nr. 1 to 7 according to the main request as filed with the grounds of appeal dated 30 September 2016;
  - Description: columns 1 to 6 as filed during the oral proceedings;
  - Figures 1 to 12 of the patent specification.

The Registrar:

The Chairman:



A. Vottner

G. Pricolo

Decision electronically authenticated