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**Datasheet for the decision
of 4 August 2011**

Case Number: T 1523/08 - 3.2.01

Application Number: 00945146.9

Publication Number: 1194330

IPC: B64C 9/04

Language of the proceedings: EN

Title of invention:

Vehicle control system and method employing control surface
and geared tab

Patentee:

The Boeing Company

Opponent:

AIRBUS Deutschland GmbH/AIRBUS France SAS/AIRBUS UK Limited/
AIRBUS España S.L./AIRBUS SAS

Headword:

-

Relevant legal provisions:

EPC Art. 54(2), 123(2)

EPC R. 116

RPBA Art. 13(3)

Relevant legal provisions (EPC 1973):

EPC R. 55(c)

Keyword:

"Novelty as fresh ground for opposition (no)"
"Novelty - main, first and third auxiliary request (no)"
"Admissibility - second auxiliary request (yes)"
"Allowability of amendments - second auxiliary request (no)"
"Procedural violation by Opposition Division (no)"
"Fourth auxiliary request - not admitted (Art. 13(3) RPBA)"

Decisions cited:

G 0010/91, T 0100/01

Catchword:

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Case Number: T 1523/08 - 3.2.01

D E C I S I O N
of the Technical Board of Appeal 3.2.01
of 4 August 2011

Appellant:
(Patent Proprietor)

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Decision under appeal:

Interlocutory decision of the Opposition
Division of the European Patent Office posted
20 June 2008 concerning maintenance of European
patent No. 1194330 in amended form.

Composition of the Board:

Chairman: G. Pricolo
Members: W. Marx
D. Keeling

Summary of Facts and Submissions

I. The appeal of the Patent Proprietor is directed against the decision of the Opposition Division posted 20 June 2008 to maintain the European patent No. 1 194 330 as amended on the basis of the third auxiliary request.

II. In its decision the Opposition Division held that the main request filed with letter dated 20 March 2008 was allowable with regard to Articles 84 and 83 EPC, that the novelty attack on amended claim 1 - a combination of claims 1 and 4 as granted, with claim 4 only attacked on inventive step in the notice of opposition - did not introduce a new ground for opposition, and that the subject-matter of claim 1 lacked novelty over

D11: DE-A-694306.

The first auxiliary request as filed during the oral proceedings was not admitted into the proceedings because it was late filed. The Opposition Division also noted that the subject-matter of claim 1 appeared to go beyond the original disclosure (Article 123(2) EPC).

The second auxiliary request as filed during the oral proceedings (corresponding to auxiliary request 1 filed with letter dated 20 March 2008) was admitted but not allowed for lack of novelty over D11.

The third auxiliary request as filed during the oral proceedings (corresponding to the second auxiliary request except for the deletion of claim 1) was admitted and found allowable.

- III. Together with its grounds of appeal dated 30 October 2008 the Appellant filed a new first auxiliary request in case the Appellant's main request were to be refused, the first and second auxiliary requests underlying the decision under appeal becoming the second and third auxiliary requests respectively.
- IV. In the annex to the summons to oral proceedings the Board expressed its preliminary opinion that even if the second auxiliary request were admitted into the proceedings, it appeared not to be allowable for lack of compliance with Article 123(2) EPC, because claim 1 contained features of contradicting embodiments of the patent in suit. In particular, the backup tab actuator, which was only defined in the embodiment of Figure 3, could not be associated to the embodiment according to Figure 1.
- V. In preparation for the oral proceedings a new fourth auxiliary request was filed by the Appellant with letter dated 4 July 2011. A clean copy of the current second auxiliary request was filed with letter dated 2 August 2011.
- VI. In the oral proceedings, held on 4 August 2011, the Appellant requested that the decision under appeal be set aside and that the patent be maintained in accordance with the main request underlying the decision under appeal; or the first auxiliary request as filed with the grounds of appeal; or the second and third auxiliary requests, corresponding to the first and second auxiliary requests underlying the decision

under appeal respectively; or the fourth auxiliary request filed with letter dated 4 July 2011.

The Respondent requested that the appeal be dismissed.

During the oral proceedings the Appellant withdrew its request for reimbursement of the appeal fee as filed with the statement of grounds of appeal.

Further, the Respondent withdrew its request, as filed during the written phase of the proceedings, to refer a set of questions to the Enlarged Board of Appeal.

VII. The wording of claim 1 of the main request is the following:

"A control system (10, 10', 110) for a vehicle, the control system having a trailing edge control surface mounted for pivotal movement about a control surface pivot axis (16, 116) to be fixed relative to the vehicle, and a control surface actuator connected between the vehicle and the control surface (12) and operable to pivotally move the control surface, the control system comprising:

 a tab (24) connected to the control surface so as to be pivotable about a tab pivot axis located aft of the control surface pivot axis;

 a linkage (28) having an aft end connected to the tab and extending forward therefrom to a forward end of the linkage, the forward end of the linkage being movable along a path so as to permit the forward end to be selectively placed in various positions including a neutral position in which a pivot point on the forward end is in line with the control surface pivot axis

resulting in no relative movement of the tab during movement of the control surface and other positions in which the pivot point is displaced from the control surface pivot axis, and

a gearing-control actuator (20) connected to the linkage and operable to move the linkage so as to cause the forward end thereof to move along said path, the gearing-control actuator being further operable to position the forward end of the linkage at selectively variable distances on either of the opposite sides of the neutral position so as to vary an effective gearing ratio, positive and/or negative, between the control surface and the tab;

the control system characterized by:

a backup tab actuator (112) coupled to the linkage and operable to move the linkage forward and aft for pivotally moving the tab during a failure of a primary actuator system that moves the control surface (12)."

First auxiliary request

Claim 1 of the first auxiliary request adds at the end of claim 1 of the main request the following feature:

"and the gearing-control actuator comprising one of an electric, hydraulic, and pneumatic actuator."

Second auxiliary request

Claim 1 of the second auxiliary request reads as follows: (for ease of comprehension, the Board has indicated additions compared to claim 1 of the main request by underlining and deletions by striking out)

"A control system (10, 10', 110) for a vehicle, the control system having a trailing edge control surface mounted for pivotal movement about a control surface pivot axis (16, 116) to be fixed relative to the vehicle, and a control surface actuator connected between the vehicle and the control surface (12) and operable to pivotally move the control surface, the control system comprising:

a tab (24) connected to the control surface so as to be pivotable about a tab pivot axis located aft of the control surface pivot axis;

a linkage (28) having an aft end connected to the tab and extending forward therefrom to a forward end of the linkage, the forward end of the linkage being movable along a path so as to permit the forward end to be selectively placed in various positions including a neutral position in which a pivot point on the forward end is in line with the control surface pivot axis resulting in no relative movement of the tab during movement of the control surface and other positions in which the pivot point is displaced from the control surface pivot axis, and

a gearing-control actuator (32) connected to the linkage and movable in a direction that is generally normal to a plane containing both the control surface pivot axis (16) and the aft end of the linkage, the gearing-control actuator being operable to move the linkage ~~so as to~~ and cause the forward end thereof to move along said path, the gearing-control actuator being further operable to position the forward end of the linkage at selectively variable distances on either of the opposite sides of the neutral position ~~so as to vary an effective gearing ratio, positive and/or negative,~~ such that both positive and negative gearing

ratios between the control surface and the tab can be achieved;

the control system characterized ~~by~~ in that:

the gearing-control actuator (32) is pivotal about an end opposite from an end connected to the linkage (28), and

a separate backup tab actuator (112) is coupled to the linkage and operable to move the linkage forward and aft for pivotally moving the tab during a failure of a primary actuator system that moves the control surface (12)."

Third auxiliary request

Claim 1 of the third auxiliary request adds at the end of claim 1 of the main request the following feature:

"and in that the gearing-control actuator (32) is operable to position the forward end of the linkage in the neutral position upon detection of a failure of the control surface actuator such that the tab (24) when driven by the backup tab actuator (112) acts as a control tab for driving the control surface."

Furthermore, the wording "characterized by: a backup tab actuator" has been amended to read "characterized ~~by~~ in that: it further comprises a backup tab actuator".

Fourth auxiliary request

Claim 1 of the fourth auxiliary request adds to the characterizing portion of claim 1 of the third auxiliary request the following feature:

"and an actuatable bypass valve provided in parallel with the control surface actuator (20), which bypass valve can be activated during the failure mode of operation to bypass fluid around the control surface actuator (20);"

Moreover, the wording "control surface actuator" in lines 4-5 has been amended to read "hydraulic control surface actuator (20)".

VIII. The Appellant's arguments may be summarised as follows:

Claim 1 of the main request was a combination of claims 1 and 4 as granted and was filed in response to the preliminary opinion of the Opposition Division that claim 1 as granted lacked novelty. The Opponent's novelty attack on claim 1 of the main request constituted a fresh ground for opposition, which should have been disregarded, since claim 4 as granted was attacked only for lack of inventive step in the notice of opposition.

Anyway, the subject-matter of claim 1 of the main request was novel over the disclosure of D11. D11 did not disclose any actuator, let alone the combination of a gearing-control actuator and a backup tab actuator as two separate actuators. In fact, the term "actuator" implied a powered device. This was confirmed by the definition given in the AGARD Multilingual Aeronautical Dictionary ("power operated device") which represented the actual understanding of the person skilled in the art. Neither a simple mechanical linkage, nor a hand lever/throttle or a flap as shown in Figure 3 of D11 represented an actuator in the sense of claim 1.

In addition, D11 did not implicitly disclose a control surface actuator, since the control system of D11 was a purely mechanical, pilot powered system, not including any kind of actuator in the normal sense of the word.

Moreover, D11 failed to disclose two separate movements effected by the gearing-control actuator and the backup tab actuator, respectively, in accordance with the wording of claim 1, which defined one movement along a path for positioning the forward end of a linkage for varying the gearing ratio, and another movement of the linkage forward and aft for pivotally moving the tab. In the context of the patent in suit, these definitions implied both a vertical movement and a horizontal movement. In contrast to that, the forward end of the linkage in D11 could perform only a single up-and-down movement along the guide.

Even considering the throttle and flap of D11 as separate actuators, the throttle or flap which allegedly constituted the backup tab actuator of D11 would not be operable to move the linkage forward and aft for pivotally moving the tab during a failure of the primary actuator system that moved the control surface. In fact, in such case, when the pivot angle of the elevator or "control surface" in D11 became zero (referred to by the Appellant as "neutral position" of the elevator), the auxiliary rudder or "tab" in D11 could not be deflected simply because different positions of the sliding block in the guide of D11 would have no effect on the auxiliary rudder.

The first auxiliary request was both novel and inventive because nothing in D11 suggested that the throttle or flap might be either electric, hydraulic or pneumatic. The mention in D11 of "control and auxiliary motors" was not a specific disclosure of such means.

The Opposition Division was wrong not to admit the second auxiliary request (which corresponded to the first auxiliary request as filed during the oral proceedings before the Opposition Division) for reasons of its late filing, invoking Rule 116 EPC and further referring to substantial amendments that could not have been expected by the Opponent. In any case, the Opponent had raised an objection of lack of novelty of claim 1 of the main request, which corresponded to the combination of claims 1 and 4 as granted, for the first time only about three weeks before the oral proceedings. The Opponent had never before objected to the novelty of claim 4. Thus, the Proprietor should have been given a fair opportunity to respond to this new ground, which it did by filing a new auxiliary request.

Moreover, in the decision under appeal the Opposition Division first identified the basis for the amendments of the second auxiliary request, then stated that the claim of the new auxiliary request contained subject-matter which appeared to go beyond the original disclosure. These two statements were contradictory. Furthermore, no reasons were given in respect of the alleged unallowable extension.

The Board's preliminary assessment, set out in the communication accompanying the summons to oral

proceedings, that claim 1 of the second auxiliary request contained features of contradicting embodiments appeared to be based on an incorrect interpretation of the contents of the application as filed. The embodiments described had in common a gearing-control actuator, oriented generally vertically or normal to a plane containing the control surface pivot axis and the aft end of the linkage. It was clear for the skilled person that the functioning of the gearing-control actuator was essentially the same for all embodiments. Therefore, the orientation of the gearing-control actuator in Figure 3 (explicitly defined as "oriented generally vertically") had to be the same as that in Figure 1 (explicitly defined as "generally normal to a plane containing both the control surface pivot axis 16 and the aft end of the linkage 28"), *i.e.* there was no contradiction between the arrangement and functioning of the gearing-control actuator according to Figure 1 and 3. In fact, even with the backup tab actuator actuated, the gearing control actuator always remained generally normal to the above-identified reference plane due to the relatively small angles involved. Moreover, the exact orientation of the gearing-control actuator was no longer relevant when the backup tab actuator was activated.

With regard to the third auxiliary request (corresponding to the second auxiliary request filed before the Opposition Division), contrary to the view of the Opposition Division, the condition "upon detection of a failure of the control surface actuator ..." was a technical feature implicitly defining a means for detecting the failure and for controlling the gearing-control actuator to move the forward end of the

linkage to the neutral position. Moreover, the disclosure of D11 did not allow the forward end of the linkage to be placed in its neutral position by a gearing-control actuator while at the same time driving the tab by a backup tab actuator to act as a control tab for driving the control surface.

Furthermore, the Opposition Division committed a substantial procedural violation by first announcing, during oral proceedings, that claim 1 of the third auxiliary request was novel ("res judicata"), and then taking an opposing view after the discussion on inventive step.

The fourth auxiliary request was filed in preparation for the oral proceedings with letter dated 4 July 2011. It was based on the third auxiliary request, including in claim 1 the further limitation that the control surface actuator is a hydraulic actuator with an actuatable bypass valve arranged in parallel.

IX. The arguments of the Respondent may be summarised as follows:

The Opposition Division was correct in admitting the novelty attack on claim 1 of the amended main request because novelty as a ground for opposition as such had been raised within the opposition period. In any case, the Opposition Division could exercise its discretionary power to admit a new ground for opposition that was prima facie relevant, and, since it had done so, the ground of opposition of lack of novelty was in the proceedings and had to be considered by the Board.

The subject-matter of claim 1 of the main request lacked novelty over D11. The dictionaries cited by the Appellant showed that an "actuator" might function purely mechanically. Moreover, the patent in suit did not support the term "actuator" being restricted to electric, hydraulic or pneumatic actuators. Hence, the throttle lever and the flap lever disclosed by D11 for moving independently from each other a sliding block could be regarded as gearing-control actuator and backup tab actuator respectively. Since the guide for the sliding block in D11 was curved, the backup tab actuator when moving the sliding block would also move the linkage forward and aft as recited by claim 1.

As D11 showed that control and auxiliary motors could be used, which could only be understood by the skilled person as electric, hydraulic or pneumatic actuators, the subject-matter of claim 1 of the first auxiliary request lacked novelty over D11.

The Opposition Division was correct in not admitting the second auxiliary request as late filed, since said request contained unexpected amendments due to features taken from the description. This kind of amendments clearly also raised doubts with respect to Article 123(2) EPC. Hence, said request was not admissible and also not allowable.

Moreover, the term "separate" introduced in claim 1 of the second auxiliary request was not originally disclosed and left unclear whether both actuators were physically separated or not. In fact, in Figure 3 the two actuators were directly connected to each other.

Thus, the amendments made were contrary to the requirements of Article 123(2) and Article 84 EPC.

As to claim 1 according to the third auxiliary request, D11 showed a throttle operable to position the forward end of the linkage in a neutral position, and the backup tab actuator of D11 (e.g. the flap lever) could move the sliding block independently so that the tab acted as a control tab for driving the control surface. The failure detection condition was not a limiting technical feature and therefore the subject-matter of claim 1 of the third auxiliary request lacked novelty over D11.

The fourth auxiliary request was received by the Respondent only three and a half weeks before the oral proceedings and incorporated a feature taken from the description, so that it was not possible to perform a detailed search to assess the patentability of said request without adjournment of the oral proceedings. Moreover, the fourth auxiliary request was not allowable for clarity reasons because the disclosure in the patent in suit showed a bypass for the fluid path (*i.e.* for all the fluid) through the control surface actuator, not a bypass for fluid.

Reasons for the Decision

1. The appeal is admissible.

2. *Main request*

2.1 Novelty as a fresh ground for opposition

It is a fact that claim 4 as granted, which has been combined with claim 1 as granted to form claim 1 of the main request, was only objected for lack of inventive step in the notice of opposition. However, lack of novelty as a ground for opposition was raised in the notice of opposition and substantiated e.g. with respect to claim 1. Hence, lack of novelty as a ground for opposition cannot be regarded as a fresh ground for opposition.

This is in line with G 10/91, in which it is stressed that the grounds for opposition are linked to the "statement pursuant to Rule 55(c) EPC 1973" (see points 15. and 16.), with Rule 55(c) EPC 1973 requiring the opponent to present an indication of the facts and evidence in support of the grounds for opposition. This means that a ground for opposition raised must be substantiated with facts and evidence, but it cannot be inferred that a ground for opposition raised and substantiated in the notice of opposition with respect to an independent claim - in the present case, claim 1 - but not with respect to a dependent claim - in the present case, claim 4 - will amount to the introduction of a fresh ground for opposition when substantiated for the combination of the independent and the dependent claim - in the present case, the combination of claims 1 and 4 - only later in the proceedings.

2.2 Novelty

The subject-matter of claim 1 of the main request is not new in view of D11 (Article 54(1) and (2) EPC).

In the Board's view, D11 discloses a control system for a vehicle (title: "Luftfahrzeugsteuerung"), the control system having

- a trailing edge control surface (Figures and page 2, line 58: "Hauptrunder b", *i.e.* elevator) mounted for pivotal movement (implicit for the elevator) about a control surface pivot axis to be fixed relative to the vehicle (see Figures: pivot axis in the centre of guide i), and

- a control surface actuator connected between the vehicle and the control surface and operable to pivotally move the control surface (the elevator is moved by the pilot actuating suitable control means, such as *e.g.* a control stick or yoke), the control system comprising:

- a tab (Figures and page 2, line 37: "Hilfsrunder c") connected to the control surface so as to be pivotable about a tab pivot axis located aft of the control surface pivot axis (see Figures);

- a linkage (Figures and page 2, line 48: "Hilfsrunderstoßstange l") having an aft end connected to the tab and extending forward therefrom to a forward end of the linkage, the forward end of the linkage being movable along a path (page 2, lines 44-49: movable along guide or "Führung i") so as to permit the forward end to be selectively placed in various positions including a neutral position in which a pivot point on the forward end is in line with the control surface pivot axis (page 2, lines 111-114) resulting in no relative

movement of the tab during movement of the control surface and other positions in which the pivot point is displaced from the control surface pivot axis, and

- a gearing-control actuator (Figure 3 and page 2, lines 66-80: "Gashebel n" or "der an die Landeklappe angeschlossene Hebel o") connected to the linkage (see Figure 3) and operable to move the linkage so as to cause the forward end thereof to move along said path (page 2, lines 66-80), the gearing-control actuator being further operable to position the forward end of the linkage at selectively variable distances on either of the opposite sides of the neutral position so as to vary an effective gearing ratio, positive and/or negative, between the control surface and the tab (page 2, lines 52-65 and line 121 ff), and
- a backup tab actuator (Figure 3 and page 2, lines 66-80: "der an die Landeklappe angeschlossene Hebel o" or "Gashebel n") coupled to the linkage (see Figure 3) and operable to move the linkage forward and aft for pivotally moving the tab during a failure of a primary actuator system that moves the control surface (see Figure 3).

The Board judges that the meaning of the term "actuator" is not restricted to a powered device as argued by the Appellant, but includes also mechanical parts which are actuated by human power, such as a mechanical linkage the displacement of which is controlled by a hand-operated lever. This is supported by the definitions in at least some of the dictionaries cited by the Appellant, confirming that "an actuator is a mechanical device for moving or controlling a mechanism or system" (Wikipedia). Besides, only dependent claim 4 of the main request (claim 2 as

granted) limits the "actuator" to an electric, hydraulic or pneumatic actuator, thus defining a powered device by specifying the source of power. The Appellant argued that the person skilled in the art, when reading the term "actuator", would understand "a power-operated device" as defined in the AGARD Multilingual Aeronautical Dictionary. However, in the Board's view, when a term does not unequivocally have a specific meaning, the broader meaning has to be taken into account. And even considering that "actuator" relates to power-operated devices, as long as the source of power is not further defined, a device where human power is applied by the pilot constitutes a power-operated actuator as well. Therefore, the throttle n and the flap lever o disclosed in D11 which are operated e.g. by the pilot fall under the meaning of the term "actuator".

Therefore, by showing two devices - throttle n and flap lever o in Figure 3 of D11 - connected to the linkage l, D11 discloses two separate actuators that may function independently of each other, as the gearing-control actuator and the backup tab actuator defined in claim 1.

Similarly, the control means disclosed in D11 for moving the elevator b or control surface, which is actuated by the pilot, is also to be regarded as a control surface "actuator".

In fact, D11 shows the forward end of the linkage l moving along the guide or path i, e.g. when the pilot actuates the throttle n (only), i.e. the gearing-control actuator. However, when actuating the flap and

thereby flap lever o (for which the pilot has dedicated control means at its disposal), *i.e.* the backup tab actuator, linkage l is also moved forward and aft for pivotally moving the tab, due to the curved shape of guide i; such forward and aft movement is necessary to change the gearing ratio, otherwise it would not be possible to pivot the tab by moving the linkage l which is connected to a lever m fixed to tab c, as depicted in the Figures of D11. It does not matter that the forward and aft movement of the linkage is again effected in D11 by moving the sliding block k along the guide i, as long as said movement of the sliding block results in a forward and aft movement of the linkage l as claimed in claim 1. The Appellant stated that, in the context of the patent in suit, the two movements defined in claim 1 corresponded to a vertical movement and a horizontal movement, whereas the forward end of the linkage in D11 could only perform an up-and-down movement. However, claim 1 does not contain a definition of vertical and horizontal movements. Moreover, claim 1 as it stands defines on the one hand that the gearing-control actuator is operable "to move the linkage so as to cause the forward end thereof to move along said path", and on the other hand that the backup tab actuator is operable "to move the linkage forward and aft for pivotally moving the tab". Thus claim 1 defines a first movement of the forward end of the linkage and a second movement which might well be effected also by moving the forward end of the linkage in a guide as disclosed in D11.

The Appellant admitted that D11 showed a change of gearing ratio, but contested that D11 included a provision to move the tab in case of a failure of a

primary actuator system that moves the control surface. The failure condition relates to a failure of the control surface actuator, the control surface comprising e.g. an elevator (see patent in suit, column 5, line 1) which would correspond to the elevator b in D11. As elaborated in the patent in suit, when the failure occurs, the control surface is either allowed to pivot freely (column 8, lines 39-41), or pivotal deflection of the control surface is prevented by a locking mechanism (column 9, lines 6-10). Assuming a similar failure occurring in the control system of D11, resulting e.g. in the elevator being blocked, the pilot may still move the linkage forward and aft by operating the flap (or the throttle, depending on which actuator is assigned to be the gearing-control actuator and the backup tab actuator) as a backup tab actuator. Hence, the flap lever o of D11 might well function as a backup tab actuator in case of such failure condition. In this respect it must be noted that the feature "backup tab actuator ... operable to move ... the tab during a failure ..." neither refers to a specific failure condition nor defines that the latter has to be detected by some means, but only requires the tab to be operated by suitable means (acting as backup means) when a failure occurs in the actuator moving the control surface.

The Appellant further argued that the tab in D11 could not be deflected any more when the pivot angle of the elevator b became zero due to a failure. However, a failure in the actuator of elevator b does not prevent sliding block k from being moved within the guide i via the throttle n or the flap lever o, the linkage thereby

being moved forward and aft and thus pivotally moving the tab.

3. *First auxiliary request (filed with grounds of appeal)*

3.1 Claim 1 according to the first auxiliary request is amended by combining claim 1 of the main request with the features of claim 2 as granted.

3.2 Novelty

The subject-matter of claim 1 of the first auxiliary request is not novel over D11 (Article 54(1) and (2) EPC).

D11 discloses embodiments where the linkage, lever and guide are replaced by control and auxiliary motors (page 2, lines 89-95). Such kind of motors used in an aircraft must be driven by a source of power available on the aircraft, which implicitly is either electric, hydraulic or pneumatic.

As pointed out in decision T 100/01 of 5 February 2004, when considering how far the teaching in a written description of an allegedly novelty-destroying document also makes available certain features which are not explicitly stated, *i.e.* implicit or intrinsic features, all that matters is the whole contents of the said document alone as read and interpreted by the skilled person against the background of common general knowledge, *i.e.* the knowledge generally available at the relevant filing date, not later.

The Appellant argued that D11 does not show a specific disclosure of an electric, hydraulic or pneumatic actuator, the passage cited in D11 not being an enabling disclosure. However, at the time when D11 was filed, the power sources available on an aircraft for driving a motor were exclusively electric, hydraulic or pneumatic. Therefore, the person skilled in the art when reading "control motor" in D11 will necessarily understand a motor driven by either electric, hydraulic or pneumatic power, *i.e.* an electric, hydraulic or pneumatic actuator. Accordingly, the additional features introduced in claim 1 are known from D11 and cannot confer novelty to its subject-matter.

4. *Second auxiliary request (filed in oral proceedings in opposition)*

4.1 Non-admittance in opposition proceedings

During the oral proceedings the Board found that the second auxiliary request had to be admitted into the proceedings, for the following reasons:

Claim 4 as granted, which was incorporated in claim 1 of the main request filed with letter of 20 March 2008 during opposition proceedings, was only attacked for lack of inventive step in the notice of opposition. The Patent Proprietor was therefore taken by surprise by the Opponent's novelty objection raised with letter of 16 April 2008, filed three weeks before the date of oral proceedings. In the Board's view, the filing of the second auxiliary request was to be regarded as a reaction to the new situation and therefore a bona fide attempt by the Patent Proprietor to overcome the

objection of lack of novelty. Accordingly, there was no ground to disregard the request merely because it was not filed in due time based on Rule 116 EPC.

As regards the alleged unallowable amendments under Article 123(2) EPC, the minutes and the decision do not reveal the Opposition Division's reasons for taking this view. In the decision under appeal, on the one hand the basis for the amendments is summarized in detail, and on the other hand it is stated that the claim contains subject-matter which appears to go beyond the original disclosure, without further explanations.

Thus, the Board cannot recognize any sound basis for the exercise of the discretion of the Opposition Division not to admit the second auxiliary request.

4.2 Allowability under Article 123(2) EPC

Claim 1 of the second auxiliary request has been amended mainly by defining in more detail the directions of movement of the gearing-control actuator (based on page 8, lines 3-5 and page 10, lines 11-14 of the application as filed) and by adding the term "separate" to make clear that the gearing-control actuator and the backup tab actuator are separate actuators.

The definition of the gearing-control actuator being "movable in a direction that is generally normal to a plane containing both the control surface pivot axis (16) and the aft end of the linkage" is disclosed in the description (page 8, lines 3-5) in relation to the

first embodiment according to Figure 1, whereas the definition "pivotal about an end opposite from an end connected to the linkage (28)" refers to the second embodiment as shown in Figure 3 (see brief description of the drawings in [0016] of patent in suit). Only the second embodiment contains a separate backup tab actuator as claimed in claim 1 and corresponds therefore to an embodiment of the invention as claimed.

The Board cannot follow the Appellant's argument that the orientation of the gearing-control actuator as described for the first embodiment ("generally normal to a plane containing both the control surface pivot axis (16) and the aft end of the linkage") applies also to the embodiment according to Figure 3 in which a backup tab actuator moves the linkage forward and aft during a failure of the primary actuator system. This mode of operation under failure requires that the gearing-control actuator is "pivotal about an end opposite from an end connected to the linkage" as claimed. As soon as the gearing-control actuator (32) is pivoted by the backup tab actuator (112) in order to move the tab during a failure, the geometrical relationship changes in that the gearing-control actuator is oriented differently with respect to the plane as defined in claim 1; the movement direction of the gearing-control actuator is no longer "generally normal" to said plane.

The expression in the passage in column 7, line 46 of the patent in suit cited by the Appellant, that the gearing-control actuator according to the second embodiment is "oriented generally vertically", merely refers to one of the possible configurations of the

linkage illustrated in Figure 3. Reading further said passage, it is stated that the gearing-control actuator is "directly below the control surface pivot axis 16", as illustrated in Figure 3, and that the backup tab actuator is "operable to cause the gearing-control actuator 32 to pivot forward and aft about its lower end". This disclosure makes clear that the orientation "generally vertically" only applies for the specific situation depicted in Figure 3, where the backup tab actuator is not yet operated, and does not mean that said orientation also applies when the gearing-control actuator is pivoted by operating the backup tab actuator. Moreover, the patent in suit does not suggest that only small angles are involved when pivoting the gearing-control actuator. Therefore, it cannot be accepted that the expression "generally vertically" disclosed for the embodiment according to Figure 3 implies that the gearing-control actuator of said embodiment is movable in a direction that is generally normal to the plane as defined with regard to the first embodiment of Figure 1.

The argumentation of the Appellant that the orientation of the gearing-control actuator is not relevant any more as soon as the backup tab actuator is operated during a failure does not take into account that claim 1 as it stands defines the control system without any restraint in the two directions of movement of the gearing-control actuator.

As a consequence, the subject-matter of claim 1 includes subject-matter extending beyond the content of the application as originally filed so that the second

auxiliary request is not allowable under Article 123(2) EPC.

5. *Third auxiliary request*

5.1 Question of procedural violation by the Opposition Division

The Board judges that the Opposition Division, when first announcing that the Opposition Division "considers claim 1 of the second auxiliary request to be novel" (see minutes, page 5, fifth paragraph) and then, after having reassessed document D11, "came to the conclusion that document D11 does in fact take away novelty of claim 1 of the second auxiliary request" (minutes, page 5, last paragraph) did not announce a decision but just an opinion at the given stage of the proceedings. Before a decision is announced, it is still possible for the members of an Opposition Division to reconsider their opinion or to change their mind, e.g. if new circumstances arise.

Therefore, the Opposition Division did not commit any substantial procedural violation as alleged by the Appellant.

5.2 Claim 1 according to the third auxiliary request is amended by combining claims 1, 4 and 5 as granted.

5.3 Novelty

The subject-matter of claim 1 of the third auxiliary request is not new in view of D11 (Article 54(1) and (2) EPC).

The new feature in comparison to claim 1 of the main request (see point VII. above) defines an interaction of three actuators: upon detection of a failure in the control surface actuator, the gearing-control actuator is operable to position the forward end of the linkage in the neutral position, and the backup tab actuator is capable of driving the tab (note the wording in claim 1: "the tab when driven by the backup tab actuator") to act as a control tab for driving the control surface.

As argued already above with regard to the backup tab actuator in the main request, the feature "gearing-control actuator ... operable to position ... upon detection of a failure ..." does not define a specific failure condition that has to be detected, but just the operability of the gearing-control actuator when a failure occurs in the control surface actuator. Assuming a failure occurring in the control surface actuator of D11, resulting e.g. in the elevator b being blocked, the pilot may still position the forward end of the linkage in the neutral position by operating the throttle n (or the flap and thereby the flap lever o, depending on which actuator is assigned to be the gearing-control actuator and the backup tab actuator) as a gearing-control actuator. Hence, the function of the gearing-control actuator relating to a failure condition as defined in claim 1 of the third auxiliary request is known from D11.

Moreover, as argued already for the main request, D11 shows two actuators, the throttle n corresponding to the gearing-control actuator and the flap lever o corresponding to the backup tab actuator, both acting

on a common linkage g to effect a movement of the sliding block k in the guide i, thereby superimposing the effects of changing throttle position and flap deflection (see page 2, lines 73-80). Therefore, the backup tab actuator o in D11 when driven will move the tab, and the remaining issue to discuss is whether the tab acts as a control tab for driving the control surface as claimed.

The tab can only effect a movement of the control surface when the control surface is allowed to pivot freely in case of a failure of the control surface actuator, which corresponds to the first failure case described in the patent in suit (column 8, line 37 ff). In said case, as with the system according to the patent in suit (column 8, lines 39-46), deflection of the tab causes the control surface to be deflected in an opposite direction, *i.e.* the tab functions as a control tab for providing the motive force to move the control surface. This behaviour results from the aerodynamic forces acting on the tab and the control surface. Hence, movement of the tab in D11 when driven by the backup tab actuator will also result in the control surface, when allowed to pivot freely, being deflected in an opposite direction.

The Appellant argued that the tab in D11 could not be deflected any more when the pivot angle of the elevator b became zero ("neutral position" of the control surface) due to a failure of the control surface actuator system, regardless of the position of the sliding block k. However, a failure in the actuator of the elevator b in D11 does not prevent sliding block k from being moved within the guide i via the throttle n

or the flap lever o, the linkage l thereby being moved forward and aft for pivotally moving the tab. Such independent movement of the tab is possible in D11 no matter whether the elevator b assumes its neutral position or not.

The Appellant also argued that claim 1 should be read such that the gearing-control actuator is not only operable to position the forward end of the linkage in the neutral position upon detection of the failure, but that the gearing-control actuator should always remain in the neutral position. However, claim 1 as it stands does not include such limitation. Moreover, claim 1 defines how two actuators - the gearing-control actuator and the backup tab actuator - both acting on the same linkage might interact upon detection of a failure. The definition that the gearing-control actuator is operable to position the forward end of the linkage in the neutral position implies a possible mode of operation ("is operable to"). Assuming this neutral position as a starting point (as suggested by the expression "such that"), the tab when driven by the backup tab actuator acts as control tab for driving the control surface. It is clear from the above that the mechanism of D11 allows for taking the neutral position as a starting point by actuating the throttle n and then driving the tab as a control tab for driving the control surface by operating the flap lever o.

6. *Fourth auxiliary request*

The fourth auxiliary request was filed at a very late stage of the appeal proceedings, one month before the oral proceedings. Claim 1 is amended by adding features

from the description, relating to a hydraulic bypass valve in order to achieve free pivoting of the control surface in case of failure. Thus claim 1 relates to a very specific arrangement which was not claimed previously. Indeed, although the patent as granted mentions in method claim 9 (corresponding to claim 15 of the original application) the concept of a control surface allowed to pivot during a failure of the control surface actuator, this claim does not define the specific arrangement now claimed.

Accordingly, in the Board's view, the Respondent could not have anticipated this turn of events. Thus, the admission of a claim including a new feature from the description at such a late stage of the appeal proceedings would not only jeopardize the procedural fairness towards the Respondent, it would also raise issues which the Board or the Respondent could not reasonably be expected to deal with without adjournment of the oral proceedings. Thus, the Board exercised its discretion not to admit the fourth auxiliary request into the proceedings (Article 13(3) of the Rules of Procedure of the Boards of Appeal (RPBA)).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

A. Vottner

G. Pricolo