

Internal distribution code:

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

**Datasheet for the decision
of 27 April 2021**

Case Number: T 1953/17 - 3.5.05

Application Number: 09011585.8

Publication Number: 2296128

IPC: G08G5/00, H04B7/185, H04H20/06

Language of the proceedings: EN

Title of invention:
ADS-B monitoring and broadcasting services for global air
traffic management using satellites

Patent Proprietor:
Thales Alenia Space Deutschland GmbH

Opponent:
Airbus Defence and Space GmbH/
Airbus Defence and Space SaS

Headword:
Satellite-based ADS-B system/THALES

Relevant legal provisions:
EPC Art. 123(2)
RPBA Art. 12(4)

Keyword:

Amendments - added subject-matter (yes)
Late-filed evidence - admitted (no)
Late-filed request - admitted (no)

Decisions cited:

T 0131/15, T 1127/16

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 1953/17 - 3.5.05

D E C I S I O N
of Technical Board of Appeal 3.5.05
of 27 April 2021

Appellant: Thales Alenia Space Deutschland GmbH
(Patent Proprietor) Lilienthalstrasse 2
70825 Korntal-Münchingen (DE)

Representative: Michalski Hüttermann & Partner
Patentanwälte mbB
Speditionstraße 21
40221 Düsseldorf (DE)

Respondent: Airbus Defence and Space GmbH
(Opponent) Willi-Messerschmitt-Strasse 1
85521 Ottobrunn (DE)

Airbus Defence and Space SaS
31, rue des Cosmonautes
31402 Toulouse Cedex 4 (FR)

Representative: Plasseraud IP
66, rue de la Chaussée d'Antin
75440 Paris Cedex 09 (FR)

Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 18 July 2017
revoking European patent No. 2296128 pursuant to
Article 101(3) (b) EPC.**

Composition of the Board:

Chair A. Ritzka
Members: P. Cretaine
E. Mille

Summary of Facts and Submissions

I. This appeal is against the decision of the opposition division, dispatched on 18 July 2017, to revoke European patent No. 2 296 128. The patent was revoked on the ground that a main request (claims as granted) and auxiliary requests 1a, 1b, 2a to 2d, 3a to 3d and 4a to 4d (hereinafter designated as the first set of auxiliary requests) did not meet the requirements of Article 123(2) EPC. Furthermore, auxiliary requests 1, 1a', 1b', 2a' to 2d', 3a' to 3d' and 4a' to 4d' (hereinafter designated as the second set of auxiliary requests) were not admitted into the proceedings.

II. The patentee's notice of appeal was received on 23 August 2017 and the appeal fee was paid on 30 August 2017.

The statement setting out the grounds of appeal was received on 28 November 2017. The appellant (patentee) filed claims in accordance with auxiliary requests 1'', 1a'', 2a'', 2c'', 3a'', 3c'', 4a'' and 4c'' (hereinafter designated as the third set of auxiliary requests). The appellant also submitted the following documents:

B1: Radio Regulations, Articles, ITU, 2016, pages 1 to 442,

B2: The Satellite Communication Applications Handbook, B. R. Elbert, 2004, pages 27 to 29,

B3: Digital Satellite Communications, G. E. Corazza, 2007, pages 276 to 277.

The appellant requested that the decision of the opposition division be set aside, that documents B1 to B3 be admitted into the proceedings and that the patent be maintained on the basis of the claims as granted (main request) or of one of the requests of the first to third sets of auxiliary requests in the order of preference given in the statement setting out the grounds of appeal. In the alternative, oral proceedings were requested.

- III. By letter received on 13 April 2018, the respondent (opponent) filed the following document:

DOC9: Satellite Communication Systems - Systems Techniques and Technology, G. Maral et al., 2002, pages 4 to 7.

The respondent requested that the appeal be dismissed and, in the alternative, that oral proceedings be held.

- IV. A summons to oral proceedings was issued on 16 July 2020. In a communication sent on 18 September 2020, the board listed the points to be discussed during the oral proceedings. The board also expressed its preliminary opinion on the case. Firstly, the board indicated that it was not minded to admit the late-filed documents B1 to B3 and DOC9 into the proceedings. Furthermore, the board expressed the view that the main request and the requests of the first and second sets of auxiliary requests did not meet the requirements of Article 123(2) EPC. The board also indicated that it was not minded to admit the requests of the second set of auxiliary requests, none of which had been admitted by the opposition division (Article 12(4) RPBA 2007). Finally, the board expressed the

opinion that the requests of the third set of auxiliary requests did not appear to meet the requirement of Article 123(3) EPC.

- V. By letter received on 15 October 2020, the appellant provided further arguments in respect of the issues relating to the requirements of Article 123(2) and (3) EPC.
- VI. By letter received on 13 April 2021, the respondent provided further arguments in respect of the issues relating to the requirements of Article 123(2) and (3) EPC.
- VII. Oral proceedings were held on 27 April 2021. The appellant requested that the decision under appeal be set aside, the opposition rejected and the patent maintained as granted or, alternatively, on the basis of one of the auxiliary requests 1a, 1b, 2a-2d, 3a-3d, 4a-4d (first set of auxiliary requests), submitted with the appellant's letter dated 13 September 2016, 1, 1a', 1b', 2a'-2d', 3a'-3d', 4a'-4d' (second set of auxiliary requests), submitted with the appellant's letter dated 10 April 2017, or 1", 1a", 2a", 2c", 3a", 3c", 4a", 4c" (third set of auxiliary requests), submitted with the statement setting out the grounds of appeal, and that documents B1, B2 and B3 submitted with that statement be admitted into the appeal proceedings.

The respondent requested that the appeal be dismissed, that documents B1, B2 and B3 not be admitted into the appeal proceedings and that, if they were admitted, document DOC9, submitted with the respondent's response to the statement setting out the grounds of appeal, likewise be admitted.

At the end of the oral proceedings, the decision of the board was announced.

- VIII. By letter dated 11 May 2021, the appellant requested a correction of the minutes of the oral proceedings sent on 4 May 2021. The respondent did not comment on the appellant's request. Amended minutes of the oral proceedings, taking into account the observations of the appellant, were sent on 4 June 2021.
- IX. By letter dated 10 June 2021, the appellant further requested a correction of the minutes of the oral proceedings. By letter dated 21 June 2021, the respondent commented on the appellant's request for correction and requested another correction, distinct from that of the appellant, of the minutes. With a communication dated 22 June 2021, the board informed the parties that their respective requests for correction of the minutes were not allowed.
- X. Claim 1 of the **main request** (claims as granted) reads as follows:

"Arrangement for aircraft surveillance using an Automatic Dependent Surveillance-Broadcast, ADS-B, Monitoring, comprising a plurality of receiving stations (20, 26, 7) each adapted for receiving an ADS-B broadcast signal (5,6) emitted by an aircraft (1, 2), the broadcast signal (5, 6) comprising information regarding the aircraft (1, 2) emitting the broadcast signal (5, 6), and ground based means (11) adapted for processing the received broadcast signals (5, 6), characterized in that at least some of the receiving stations (20, 26) and antennae (20') are located on satellites, the receiving stations (20, 26) located on the satellites being in the form of: transparent

transponders, wherein the transparent transponders are adapted to mirror the received ADS-B broadcast signal (5, 6), to ground based processing means (11) by receiving the broadcast signal (5, 6), transforming it to a satellites' downlink frequency and downlinking the broadcast signal (5, 6) to the ground based processing means (11)."

First set of auxiliary requests:

Claim 1 of **auxiliary requests 1a** and **1b** adds at the end of claim 1 of the main request the following wording: ", and wherein the satellites are Low Earth Orbiting, LEO, orbiting satellites".

Claim 1 of auxiliary requests **2a** and **2b** adds at the end of claim 1 of the main request the following wording: ", and wherein the ground based processing means (11) are adapted to use data redundancy of a broadcast signal (5; 6) received by more than one receiving station (20, 26) for integrity checking".

Claim 1 of auxiliary requests **2c** and **2d** adds at the end of claim 1 of auxiliary request 2b the following wording: ", and wherein the satellites are Low Earth Orbiting, LEO, orbiting satellites".

Claim 1 of auxiliary requests **3a** and **3b** adds at the end of claim 1 of the main request the following wording: ", and wherein the ground based processing means (II) are adapted to use multilateration techniques to detect aircraft (1,2) which emit only the 1090 MS broadcast signal (5, 6) but not the 1090 MS Extended Squitter".

Claim 1 of auxiliary requests **3c** and **3d** adds at the end of claim 1 of auxiliary request 3a the following

wording: ", and wherein the satellites are Low Earth Orbiting, LEO, orbiting satellites".

Claim 1 of auxiliary requests **4a** and **4b** adds at the end of claim 1 of the main request the following wording: ", wherein the satellites (20, 26) comprise means adapted for rebroadcasting the received broadcast signals (5, 6) to other satellites or aircraft, as Automatic Dependent Surveillance-Rebroadcast, ADS-R and/or the satellites (20, 26) comprise means adapted for broadcasting Flight Information Service Broadcast, FIS-B".

Claim 1 of auxiliary requests **4c** and **4d** adds at the end of claim 1 of auxiliary request 4a the following wording: ", and wherein the satellites are Low Earth Orbiting, LEO, orbiting satellites".

Second set of auxiliary requests:

Claim 1 of **auxiliary request 1** adds at the end of claim 1 of the main request the following wording: "via a ground-based satellite receiving station (22)".

Claim 1 of auxiliary requests **1a'** and **1b'** adds at the end of claim 1 of auxiliary request 1 the following wording: ", and wherein the satellites are Low Earth Orbiting, LEO, orbiting satellites".

Claim 1 of auxiliary requests **2a'** and **2b'** adds at the end of claim 1 of auxiliary request 1 the following wording: ", and wherein the ground based processing means (11) are adapted to use data redundancy of a broadcast signal (5; 6) received by more than one receiving station (20, 26) for integrity checking".

Claim 1 of auxiliary requests **2c'** and **2d'** adds at the end of claim 1 of auxiliary request 2a' the following wording: ", and wherein the satellites are Low Earth Orbiting, LEO, orbiting satellites".

Claim 1 of auxiliary requests **3a'** and **3b'** adds at the end of claim 1 of auxiliary request 1 the following wording: ", and wherein the ground based processing means (11) are adapted to use multilateration techniques to detect aircraft (1,2) which emit only the 1090 MS broadcast signal (5, 6) but not the 1090 MS Extended Squitter".

Claim 1 of auxiliary requests **3c'** and **3d'** adds at the end of claim 1 of auxiliary request 3a' the following wording: ", and wherein the satellites are Low Earth Orbiting, LEO, orbiting satellites".

Claim 1 of auxiliary requests **4a'** and **4b'** adds at the end of claim 1 of auxiliary request 1 the following wording: ", wherein the satellites (20, 26) comprise means adapted for rebroadcasting the received broadcast signals (5, 6) to other satellites or aircraft, as Automatic Dependent Surveillance-Rebroadcast, ADS-R and/or the satellites (20, 26) comprise means adapted for broadcasting Flight Information Service Broadcast, FIS-B".

Claim 1 of auxiliary requests **4c'** and **4d'** adds at the end of claim 1 of auxiliary request 4a' the following wording: ", and wherein the satellites are Low Earth Orbiting, LEO, orbiting satellites".

Third set of auxiliary requests:

Claim 1 of **auxiliary request 1''** replaces in claim 1 of the main request the wording "downlinking the broadcast signal (5, 6) to the ground based processing means" with the wording "downlinking the broadcast signal (5, 6) to a ground-based satellite receiving station (22)".

Claim 1 of auxiliary request **1a''** adds at the end of claim 1 of auxiliary request 1'' the following wording: "and wherein the satellites are Low Earth Orbiting, LEO, orbiting satellites".

Claim 1 of auxiliary request **2a''** adds at the end of claim 1 of auxiliary request 1'' the following wording: ", and wherein the ground based processing means (11) are adapted to use data redundancy of a broadcast signal (5; 6) received by more than one receiving station (20, 26) for integrity checking".

Claim 1 of auxiliary request **2c''** adds at the end of claim 1 of auxiliary request 2a'' the following wording: ", and wherein the satellites are Low Earth Orbiting, LEO, orbiting satellites".

Claim 1 of auxiliary request **3a''** adds at the end of claim 1 of auxiliary request 1'' the following wording: ", and wherein the ground based processing means (11) are adapted to use multilateration techniques to detect aircraft (1,2) which emit only the 1090 MS broadcast signal (5, 6) but not the 1090 MS Extended Squitter".

Claim 1 of auxiliary request **3c''** adds at the end of claim 1 of auxiliary request 3a'' the following wording: ", and wherein the satellites are Low Earth Orbiting, LEO, orbiting satellites".

Claim 1 of auxiliary request **4a'** adds at the end of claim 1 of auxiliary request 1' the following wording: "wherein the satellites (20, 26) comprise means adapted for rebroadcasting the received broadcast signals (5, 6) to other satellites or aircraft, as Automatic Dependent Surveillance-Rebroadcast, ADS-R and/or the satellites (20, 26) comprise means adapted for broadcasting Flight Information Service Broadcast, FIS-B".

Claim 1 of auxiliary request **4c'** adds at the end of claim 1 of auxiliary request 4a'' the following wording: "and wherein the satellites are Low Earth Orbiting, LEO, orbiting satellites".

The main request and auxiliary requests 1a, 2a, 2c, 3a, 3c, 4a, 4c, 1, 1a', 2a', 2c', 3a', 3c', 4a' and 4c' comprise a further independent claim directed to a corresponding method.

Reasons for the Decision

1. Admissibility of documents B1 to B3 and DOC9

- 1.1 B1 to B3 were submitted by the appellant with the statement setting out the grounds of appeal. The appellant argued that the late filing of these documents was justified by the fact that it had been surprised by the objection under Article 123(2) EPC of lack of support in the application as originally filed for the feature "downlinking the broadcast signal to the ground based processing means", which had been raised for the first time during the oral proceedings before the opposition division. It contended that, with regard to this feature, the notice of opposition

contained, in section 2.1, solely an objection of intermediate generalisation under Article 123(2) EPC, based on the omission of the ground-based satellite receiving station in the definition of the downlink in claim 1 as granted. The appellant addressed this objection of inadmissible intermediate generalisation by including in claim 1 the feature "via a ground-based satellite receiving station" when filing the second set of auxiliary requests.

The board is not convinced by this line of argument. As pointed out by the respondent in this respect, the notice of opposition does in fact contain a clearly formulated objection of lack of support in the application as originally filed, set out in the first part of section 2.1 : "Par conséquent, il n'existe pas de support dans la demande telle que déposée pour un lien descendant direct entre le satellite et les moyens de traitement sol".

As a consequence, the board considers that documents B1 to B3 were late-filed.

- 1.2 The appellant argued that B1 to B3 were evidence that in the field of satellite communication the downlink generally designates the overall data link between a satellite station and a ground-based station, and is not restricted to a radio data link only.

According to the appellant, it could be seen from the ITU document B1 that the term "downlink" was not a fixed term but merely indicated the direction taken by the signal from top to bottom. The appellant relied on the table on page 281 describing transmission characteristics of the space-to-earth link in satellite communication. It showed that it was not the link

between the satellite and the ground-based satellite receiving station that the term "downlink" in the present application referred to, because there was no information about the link itself (path loss, reception level, antenna sizes at the receiver, etc.). The appellant argued that the term "downlink" was not an official ITU term and had therefore been avoided throughout B1, which used "Earth-to-space" or "Space-to-Earth" instead. As a consequence, the downlink could also describe the entire reception system, i.e., as defined in claim 1, it could also include components downstream of the ground satellite receiving station, such as the ground-based processing means.

The appellant further relied on Figure 2.1 of B2, which showed the receiver, the demodulator and the decoding devices located downstream of the receiving antenna as critical elements of a satellite link. According to the appellant, this evidenced that the downlink did not end at the ground-based satellite receiving station. Moreover, the appellant referred to page 276 in combination with Figure 7.11 of B3, which disclosed that the downlink included not only the radio links but also the hardware needed for linear filtering and non-linear processing.

However, the board agrees with the respondent that the term "downlink" has an established definition in the field of satellite communication and that it designates the radio link between a satellite emitting station and a ground-based receiving station. It is also clear that the skilled person understands that the term "downlink" is used in accordance with this definition throughout the originally filed application to designate the radio link 27 between the satellite transponder and the ground-based satellite receiving station 22 shown in

Figure 1 (see paragraphs [0014], [0017], [0019] and [0046] of the published application). With respect to the link 27, it is to be noted that the applicant consented during the grant proceedings to the amendment of the wording "air-to-air link 27" in paragraph [0047] of the published application to read "air-to-ground link 27" in paragraph [0045] of the patent publication, which is a more appropriate wording for designating a downlink. Further, the cited documents B1, B2 and B3 give the skilled person no reason to deviate from this interpretation of the term "downlink". Document B1 does not provide a definition of the term "downlink", which is not even an official ITU term, as is acknowledged by the appellant. Since the purpose of B1 is to regulate the use of radio frequency bands, the sole conclusion that can be derived from it concerns only the radio link, and confirms only that the term "downlink" means a downward radio link. When quoting documents B2 and B3, the appellant argued that the downlink itself comprises ground-based processing means. However, according to claim 1 as granted, the ground processing means and the downlink are clearly defined as two different entities, since the ground processing means correspond to where the downlink goes.

Thus, documents B1 to B3 are prima facie not relevant to the issue of the Article 123(2) EPC objection to the feature "downlinking the broadcast signal to the ground based processing means".

- 1.3 For these reasons, the board decided at the oral proceedings not to admit documents B1, B2 and B3 into the appeal proceedings (Article 12(4) RPBA 2007). Since document DOC9 was submitted by the respondent as a direct response to the submission of B1 to B3, the

board also decided under Article 12(4) RPBA 2007 not to admit document DOC9 into the appeal proceedings.

2. Main request - Article 123(2) EPC

- 2.1 The board agrees with the decision that the feature "downlinking the broadcast signal to the ground based processing means" in claim 1 is not supported by the application documents as originally filed.

There is indeed no support for the downlink connecting the satellite and the ground-based processing means. In the application as filed, the reception of the downlink signals in the sole preferred embodiment, described in relation to Figure 1, is carried out by an entity referenced as 22 in Figure 1 and designated as a ground-based satellite receiving station 22 (see paragraph [0046] of the published application) or as a satellite ground-based control station (see paragraph [0047] of the published application). In paragraphs [0014] and [0015] of the published application, it is described that the downlink signal is received by satellite ground earth stations and, in paragraph [0019], that it is received by ground stations. Only then are the broadcast signals, received by the ground-based satellite receiving station 22 or satellite ground control station, transferred to the ground processing means by a dedicated link separate from the downlink and designated as a data connection 23 (see paragraphs [0020] and [0047]).

Accordingly, the skilled person is taught by the originally filed description that the downlink is a link between the satellite and a ground-based satellite receiving station 22 or satellite ground control station and that, after the broadcast signals

transmitted on the downlink have been received by the ground-based satellite receiving station, or satellite ground control station, that station transfers the broadcast signals to the ground processing means via the dedicated link, which is separate from the downlink. Thus, the broadcast signals follow two different links between the satellite and the ground processing means: the downlink referred to in the claims, which connects the satellite and the ground based satellite receiving station, and the dedicated link between the ground-based satellite receiving station and the ground processing means. The existence of a direct downlink between the satellite and the ground processing means, i.e. the possibility of the ground-based processing means directly receiving the radio signals transmitted on the downlink by the satellite, is not described in the application as originally filed.

Therefore, the feature "downlinking the broadcast signal to the ground based processing means" present in claim 1 as granted is not supported by the application documents as originally filed, contrary to the requirements of Article 123(2) EPC.

- 2.2 The appellant argued that the term "downlink" in the field of satellite communication designates a communication link from top to bottom, i.e. from a satellite based transmitting station to a ground-based receiving station. According to it, the downlink referred to in the granted claims by the wording "downlinking the broadcast signal" was, neither in the claims nor in the description as originally filed, restricted to being a radio link only and so - contrary to what the respondent argued - should not be construed as being a radio link only. On the basis of the

description, the skilled person would thus consider that the overall data link existing between an ADS-B satellite receiving station (reference 26 in Figure 1), being in the form of transponders, and the ground-based processing means (reference 11 in Figure 1) amounted to a downlink, even if it comprised a cable connection (reference 23 in Figure 1). Therefore, since the description and claims as originally filed stated that the broadcast signals were mirrored, i.e. transmitted in full, by the satellite transponders to the ground based processing means, there was clear support for a downlink between the satellite transponders and the ground based processing means.

The board is not convinced by this line of argument. As already mentioned in point 2.1 above, the board holds that the term "downlink" has an established definition in the field of satellite communication and designates the radio link between a satellite emitting station and a ground-based receiving station. It is also clear that the skilled person understands that the term "downlink" is used in accordance with this definition throughout the originally filed application to designate the radio air-to-ground link 27 shown in Figure 1 (see paragraphs [0014], [0017], [0019] and [0046] of the published application). This interpretation of the term "downlink" as a radio frequency link is also corroborated by claim 1 as granted, which refers to a downlink frequency within the feature "transforming it to a satellite's downlink frequency and downlinking the broadcast signal to the ground based processing means". Thus, claim 1 as granted refers to the downlink frequency. Since considering the term "downlink" to mean a radio downlink is the only interpretation compatible not only with the content of the application as originally filed, but also with the wording of claim

1 as granted, the feature "downlinking the broadcast signal to the ground based processing means" present in claim 1 as granted means that the ground processing means must receive the radio signals transmitted by the satellite on the radio downlink. However, while it is conceded that the ground-based processing means ultimately process the received broadcast signals sent from the satellite, there is no support for the assertion that the ground-based processing means can receive the broadcast signals transmitted on the downlink.

At the oral proceedings, the appellant briefly referred, for the first time, to decisions T 1127/16 and T 131/15. In the board's view, the approach taken by it in the present case to assess the requirements of Article 123(2) EPC does not contradict these previous decisions.

In T 1127/16, the deciding board ruled that, with respect to the assessment of compliance with Article 123(2) EPC, a claim should essentially be read and interpreted on its own merit and that the description and the drawings do not automatically have to be consulted when an "ambiguous" feature occurs in the claim (see Catchword (1)). In the present case, the skilled person can see in claim 1 that the downlink is a radio link between the satellite transponder and the ground-based processing means. There is thus no "ambiguous" feature in the claim in this respect which would require interpretation.

T 131/15 deals with the assessment of compliance with Article 123(3) EPC (see the catchword) and is thus not relevant for the assessment of the main request's compliance with Article 123(2) EPC.

2.3 For these reasons, the board holds that the subject-matter of claim 1 as granted extends beyond the content of the application as filed and that the main request is not allowable under Article 123(2) EPC.

3. First set of auxiliary requests - Article 123(2) EPC

The independent claims of all these requests contain the feature "downlinking the broadcast signal to the ground based processing means".

Thus, for the same reasons as detailed for the main request, the board holds that these requests are not allowable under Article 123(2) EPC.

4. Second set of auxiliary requests - Article 12(4) RPBA 2007

4.1 These requests were not admitted into the proceedings by the opposition division because they were late-filed and not prima facie suitable to overcome the Article 123(2) EPC objection raised in respect of the feature "downlinking the broadcast signal to the ground based processing means". In particular, the opposition division considered these requests to be late-filed since their filing one month before the oral proceedings had not been substantiated.

The appellant argued before the opposition division that the filing of these requests directly addressed the objection of inadmissible intermediate generalisation, raised by the respondent in its notice of opposition, by adding the missing feature on which it was based. Moreover, the appellant argued before the opposition division that finding support for the

amendments and understanding why they overcame the Article 123(2) EPC objection to the main request did not involve any undue burden for the opposition division, since this objection was based on an alleged intermediate generalisation in view of the content of paragraphs [0017], [0020], [0046] and [0047] of the published application. According to the appellant, it was clear in itself that introducing the feature disclosed in these paragraphs, that the broadcast signal was always sent to the ground based processing means via a ground-based satellite receiving station, removed the intermediate generalisation.

- 4.2 However, as correctly stated by the respondent, the objection under Article 123(2) EPC was based on two issues, one being a lack of support for the feature, the other being an intermediate generalisation introduced by the feature. It was thus unclear how the amendments addressed the issue of lack of support, since the feature "downlinking the broadcast signal to the ground based processing means" was still present in all the independent claims of these auxiliary requests. Moreover, as correctly stated by the respondent, the feature "downlinking the broadcast signal to the ground based processing means via a ground based satellite receiving station", which was present in the independent claims of all the requests of the second set of auxiliary requests, was not to be found as such in paragraphs [0017], [0020], [0046] and [0047] of the published application.

The board thus holds that the opposition division was right to regard the requests of the second set of auxiliary requests as late-filed.

4.3 The feature which substantially defines that the ground-based processing means receive the broadcast signal on the radio downlink, and which is present in the independent claims of all the requests of the second set of auxiliary requests, has no support in the application documents as originally filed (see point 2), contrary to the requirements of Article 123(2) EPC.

Moreover, as argued by the respondent, it is not clear (Article 84 EPC) how the ground-based processing means could receive a radio signal, transmitted on the downlink by a satellite transponder, via a terrestrial cable connection, namely the connection (referenced as 23 in Figure 1) between the ground-based satellite receiving station and the ground-based processing means.

Furthermore, the deletion in the independent claims of the feature defining a direct downlink between the satellite and the ground-based processing means amounts to an inadmissible extension of the scope of these claims (Article 123(3) EPC) since the ground-based processing means are no longer required to receive the radio downlink signal.

4.4 The board thus holds that the opposition division correctly found that all the requests of the second set of auxiliary requests were late-filed, were not prima facie suitable to overcome the objection under Article 123(2) EPC raised against the main request, and introduced other issues related to Articles 84 and 123(3) EPC.

As a consequence, the board similarly decided at the oral proceedings not to admit the requests of the

second set of auxiliary requests into the appeal proceedings (Article 12(4) RPBA 2007).

5. Third set of auxiliary requests - Article 12(4) RPBA 2007

5.1 The appellant argued that these requests were filed with the statement setting out the grounds of appeal in response to the objection of lack of support (Article 123(2) EPC) for the feature "downlinking the broadcast signal to the ground based processing means", which had been raised for the first time during the oral proceedings before the opposition division. The appellant argued that it had been further surprised at the oral proceedings before the opposition division that the addition of the feature "via a ground-based satellite receiving station" in the requests according to the second set of auxiliary requests violated Article 123(3) EPC, since this feature had been added precisely to overcome the objection of inadmissible intermediate generalisation based on the absence of this feature in claim 1 as granted.

However, the board agrees with the respondent that the objection of lack of support had already been duly raised in the notice of opposition (see point 1.1 above) and should have been addressed in the proceedings before the opposition division. The board thus holds that these requests are late-filed.

5.2 In these requests, the contested feature "downlinking the broadcast signal to the ground based processing means" of claim 1 as granted has been replaced with "downlinking the broadcast signal to a ground-based

satellite receiving station" and the method claim has been deleted.

In respect of the requirements of Article 123(2) EPC, the appellant argued that the above-mentioned feature was supported by, in particular, paragraph [0046] of the published application: "The transparent transponders transform the received broadcast signal 5, 6 into a frequency for transmitting it from the satellite 20 to other satellites 26 or downlinking it to a ground-based satellite receiving station, like station 22". In response, the respondent argued that omitting that the ground based satellite receiving station sends the received broadcast signal to the ground based processing means constituted an intermediate generalisation (Article 123(2) EPC).

In respect of the requirements of Article 84 EPC, the appellant argued that the skilled person is clearly taught how the ADS-B data is transmitted from the satellite via the ground based satellite receiving station to the ground-based processing means, in the light of the whole description and Figure 1, in particular paragraph [0047] of the published application. By contrast, the respondent argued that, in all embodiments described in the originally filed application, the ground-based processing means performed the various processing operations on the broadcast signals emitted by the aircraft. Therefore, according to the respondent, the feature that the ground-based satellite receiving station forwarded the broadcast signals to the ground-based processing means which processed these broadcast signals was an essential feature, and its omission was thus contrary to Article 84 EPC.

In respect of the requirements of Article 123(3) EPC, the appellant first argued that claim 1 in these requests was a system claim which required only that the transponders be adapted to send the broadcast signal on a downlink to the ground-based satellite receiving station. However, a step of receiving the downlink from the satellite to the ground-based satellite receiving station was not required and thus did not form part of the subject-matter of the claim. According to the appellant, the same considerations applied to granted claim 1, where it was only required that the transponders be adapted to transmit the broadcast signal by a downlink such that it can be received on earth by a device such as the ground-based processing means. Secondly, the appellant argued that the feature "downlinking the broadcast signal to the ground based processing means" in claim 1 as granted did not state that the downlink from the satellite to the ground-based processing means was direct. In claim 1 as granted, the ground-based processing means were defined only as being adapted to process the received broadcast signals and did not have to be adapted to receive this signal in a direct downlink from the satellite. Therefore, the use in the requests of the third set of auxiliary requests of the feature "downlinking the broadcast signal to a ground-based satellite receiving station" instead of the feature "downlinking the broadcast signal to the ground based processing means" in claim 1 as granted could not constitute an extension of the scope of protection. During the oral proceedings before the board, the appellant also referred to T 131/15 and contended that the assessment of compliance with Article 123(3) EPC should be performed in accordance with the principles expressed there.

On the other hand, the respondent argued that the ground-based processing means, which were part of the claimed arrangement, were no longer defined in the claims as receiving, and thus as being able to receive, the radio signal sent by the satellite on the downlink. According to the respondent, the subject-matter of claim 1 of these requests and of claim 1 as granted was an arrangement including not only the transponders but also the ground-based processing means. In claim 1 as granted, the ground processing means were to be able to receive the radio signals transmitted by the satellite on the downlink. By contrast, in claim 1 of all the requests of the third set of auxiliary requests, the ground processing means, which were part of the claimed arrangement, no longer had to receive the radio signals transmitted by the satellite on the downlink. As to decision T 131/15, the respondent contended that this decision was not relevant to the present case.

5.3 Taking into account that the third set of auxiliary requests was late-filed and that the assessment of these requests would have involved examining the numerous issues relating to Articles 84, 123(2) and 123(3) EPC mentioned in point 5.2, the board, exercising its discretion under Article 12(4) RPBA 2007, decided at the oral proceedings not to admit the third set of auxiliary requests into the appeal proceedings.

6. Procedural matter

During the discussion of the main request at the oral proceedings, the appellant requested as a precaution that, in the event that the Board wished to deviate from the principles set out in decision T 131/15 with regard to the interpretation of the claims against the

background of the description, the case be referred to the Enlarged Board of Appeal under Article 112(1)a EPC, in order to ensure a uniform application of the law, in particular on the question whether the aforementioned principles from decision T 131/15 should continue to apply. No written formulation of a question was submitted.

As the main request and the first set of auxiliary requests were decided on the basis of Article 123(2) EPC, whereas T 131/15 deals with compliance with Article 123(3) EPC, and as the second and third sets of auxiliary requests were not admitted into the proceedings, the question of deviation from decision T 131/15 did not arise. However, the request was not pursued by the appellant when the final requests of the parties were established by the chair before announcing the decision.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chair:



K. Götz-Wein

A. Ritzka

Decision electronically authenticated