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**Datasheet for the decision  
of 24 June 2025**

**Case Number:** T 0800/23 - 3.2.05

**Application Number:** 17795008.6

**Publication Number:** 3535134

**IPC:** B42D25/324

**Language of the proceedings:** EN

**Title of invention:**

Security devices and methods of manufacture thereof

**Patent Proprietor:**

De La Rue International Limited

**Opponents:**

Leonhard Kurz Stiftung & Co. KG  
Giesecke+Devrient Currency Technology GmbH

**Relevant legal provisions:**

EPC Art. 111(1), 123(2)  
RPBA 2020 Art. 11, 12(4)

**Keyword:**

Admittance (yes: auxiliary requests 1 and 1')  
Added subject-matter (yes: main request, auxiliary request 1)  
Remittal to the opposition division (yes)

**Decisions cited:**

T 1867/07, T 0680/10, T 1400/11, T 2619/11



**Beschwerdekammern**

**Boards of Appeal**

**Chambres de recours**

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**Case Number:** T 0800/23 - 3.2.05

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.05**  
**of 24 June 2025**

**Appellant I:**

(Patent Proprietor)

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(Former opponent 2)

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**Decision under appeal:**

**Interlocutory decision of the Opposition  
Division of the European Patent Office posted on  
2 March 2023 concerning maintenance of the  
European Patent No. 3535134 in amended form.**

**Composition of the Board:**

<b>Chairman</b>	P. Lanz
<b>Members:</b>	O. Randl
	B. Burm-Herregodts

## **Summary of Facts and Submissions**

- I. Both the patent proprietor and opponent 1 filed an appeal against the opposition division's interlocutory decision on the version in which European patent No. 3 535 134 ("the patent") can be maintained in amended form.
- II. The opposition division was of the opinion that the main request and auxiliary requests 1 to 13 infringed Article 123(2) EPC, but that auxiliary request 14 met the requirements of the EPC.
- III. The board issued a communication pursuant to Article 15(1) RPBA on 15 January 2025.
- IV. By letter dated 30 January 2025, the party as of right (opponent 2) withdrew its opposition.
- V. Oral proceedings before the board were held by videoconference on 24 June 2025.
- VI. Appellant I (patent proprietor) requested that the decision under appeal be set aside and that the patent be maintained as amended, based on the main request or auxiliary requests 1, 1', 1A, 2, 3, 3A, 4, 5, 5A, 6, 7, 7A, 8, 9, 9A, 9B, 10, 11, 11A, 12, 13, 13A, 14, 15, 15A, 16, 17, 17A, 18, 18C, 19, 19A, 19C, 19D, 20, 21, 21A, 22, 23, 23A, 24, 25, 25A, 26, 27, 27A or 28 to 32, where the main request and auxiliary requests 1 to 17 and 20 to 27 were filed with appellant I's statement of grounds of appeal, auxiliary requests 28 to 32 were filed by letter dated 22 November 2023, auxiliary request 1' was filed as auxiliary request 33 by letter dated 22 November 2023, auxiliary requests 1A to 17A,

21A to 27A and 9B were filed by letter dated 31 May 2024, and auxiliary requests 18, 18C, 19, 19A, 19C and 19D were filed by letter dated 25 April 2025.

Additionally, appellant I requested that the case be remitted to the opposition division for further prosecution.

VII. Appellant II (opponent 1) requested that the decision under appeal be set aside and that the patent be revoked.

Appellant II also requested that the auxiliary requests filed for the first time on appeal not be admitted.

Additionally, appellant II requested that the case be remitted to the opposition division for further prosecution.

VIII. Claims 2, 3, 8 and 9 of the main request read as follows (the feature references used by the board are indicated in square brackets):

"2. [**A'**] A security device comprising:

[**B'**] a substrate, the substrate having opposing first and second surfaces and [**B1'**] a relief structure formed in the first surface of the substrate;

[**C'**] a reflection enhancing layer over the first surface of the substrate, [**C1'**] the reflection enhancing layer at least partially overlapping the relief structure, wherein [**C2'**] a first region of the first surface of the substrate does not have the reflection enhancing layer;

[**D'**] an absorber layer over the reflection enhancing layer, [**D1'**] the absorber layer at least partially overlapping the reflection enhancing layer and the

relief structure where the reflection enhancing layer and the relief structure overlap each other, and [D2'] the absorber layer at least partially overlapping the first region of the first surface of the substrate; [E'] an optical spacer layer over the absorber layer, [E1'] the optical spacer layer at least partially overlapping the absorber layer, reflection enhancing layer and the relief structure where the absorber layer, reflection enhancing layer and the relief structure overlap each other, [E2'] the optical spacer layer at least partially overlapping the absorber layer and the first region where the absorber layer and the first region overlap each other; and [F'] a reflector layer, formed of an at least partially reflective material, over the optical spacer layer, [F1'] the reflector layer at least partially overlapping the optical spacer layer, the absorber layer, the reflection enhancing layer and the relief structure where the optical spacer layer the absorber layer, the reflection enhancing layer and the relief structure overlap each other, and [F2'] the reflector layer at least partially overlapping the optical spacer layer, the absorber layer and the first region where the optical spacer layer, the absorber layer and the first region overlap each other; wherein [G2'] the reflection enhancing layer and the absorber layer are formed of the same material, wherein [G] the absorber layer, the optical spacer layer and the reflector layer, together, form a colour-shifting structure, and wherein [G1] the reflection enhancing layer and the absorber layer, together, are substantially opaque or transmit less than 40% of incident light, preferably less than 20% of incident light, wherein [F3-1] the relief structure is formed only in a part of the first surface of the substrate, wherein

[F3-2] the first region comprises at least some of the first surface of the substrate that does not have the relief structure, and

[F3-3] further comprising a decoupled colour-shift region, wherein [F3-4] in the decoupled colour-shift region the absorber layer, the optical spacer layer and the reflector layer overlap a part of the first surface of the substrate not having the relief structure in the first region,

characterised [G2] in that the reflection enhancing layer and the absorber layer are formed of the same material."

"3. A security device according to claim 2, wherein [C4] the reflection enhancing layer only partially overlaps the relief structure, and preferably [C5] further comprising a coupled effect region, wherein in the coupled effect region the absorber layer, the optical spacer layer and the reflector layer overlap the relief structure in the first region."

"8. [A] A method of manufacturing a security device (100) comprising:

[B] providing a substrate (10), the substrate having opposing first (10a) and second (10b) surfaces and [B1] a relief structure (15) formed in the first surface of the substrate;

[H] applying a first reflection enhancing layer (20) over the first surface of the substrate such that the first reflection enhancing layer at least partially overlaps the relief structure;

[I] applying an interrupting layer (125) over the first reflection enhancing layer in a first region (101a)

[I1] such that the interrupting layer at least partially overlaps the first reflection enhancing layer and the relief structure where the first reflection



enhancing layer and the relief structure overlap each other and **[I2]** such that the interrupting layer does not overlap the first surface of the substrate in a second region (101b);

**[J]** if the first reflection enhancing layer does not overlap the second region, applying a second reflection enhancing layer over the first surface of the substrate **[J1]** such that the second reflection enhancing layer at least partially overlaps the second region;

**[L]** applying an optical spacer layer (40) over the interrupting layer and, if provided, the second reflection enhancing layer **[L1]** such that the optical spacer layer at least partially overlaps the interrupting layer, the first reflection enhancing layer and the relief structure where the interrupting layer, the first reflection enhancing layer and the relief structure overlap each other, and **[L2]** such that the optical spacer layer at least partially overlaps the first or second reflection enhancing layer in the second region; and

**[M]** applying a reflector layer (50) over the optical spacer layer **[M1]** such that the reflector layer at least partially overlaps the optical spacer layer, the interrupting layer, the first reflection enhancing layer and the relief structure where the optical spacer layer, the interrupting layer, the first reflection enhancing layer and the relief structure overlap each other, and **[M2]** such that the reflector layer at least partially overlaps the optical spacer layer and the first or second reflection enhancing layer where the optical spacer layer and the first or second reflection enhancing layer overlap each other in the second region;

wherein **[N]** the first and/or second reflection enhancing layers, the optical spacer layer and the reflector layer, together, form a colour-shifting

structure that exhibits a colour shift in the second region as the viewing angle or angle of incident light changes, and wherein [N1] the interrupting layer interrupts the colour shift in the first region."

"9. [A'] A security device comprising:

[B'] a substrate, the substrate having opposing first and second surfaces and [B1'] a relief structure formed in the first surface of the substrate;

[H'] a first reflection enhancing layer over the first surface of the substrate, the first reflection enhancing layer at least partially overlapping the relief structure;

[I'] an interrupting layer over the first reflection enhancing layer in a first region, [I1'] the interrupting layer at least partially overlapping the first reflection enhancing layer and the relief structure where the first reflection enhancing layer and the relief structure overlap each other, and [I2'] the interrupting layer not overlapping the first surface of the substrate in a second region;

[J'] if the first reflection enhancing layer does not overlap the second region, a second reflection enhancing layer over the first surface of the substrate, [J1'] the second reflection enhancing layer at least partially overlapping the second region;

[L'] an optical spacer layer over the interrupting layer and, if provided, the second reflection enhancing layer, [L1'] the optical spacer layer at least partially overlapping the interrupting layer, the first reflection enhancing layer and the relief structure where the interrupting layer, the first reflection enhancing layer and the relief structure overlap each other, and [L2'] the optical spacer layer at least partially overlapping the first or second reflection enhancing layer in the second region; and

[M'] a reflector layer over the optical spacer layer, the reflector layer at least partially overlapping the optical spacer layer, [M1'] the interrupting layer, the first reflection enhancing layer and the relief structure where the optical spacer layer, the interrupting layer, the first reflection enhancing layer and the relief structure overlap each other, and [M2'] the reflector layer at least partially overlapping the optical spacer layer and the first or second reflection enhancing layer where the optical spacer layer and the first or second reflection enhancing layer overlap each other in the second region; wherein [N] the first and/or second reflection enhancing layers, the optical spacer layer and the reflector layer, together, form a colour-shifting structure that exhibits a colour shift in the second region as the viewing angle or angle of incident light changes, and wherein [N1] the interrupting layer interrupts the colour shift in the first region."

Auxiliary request 1 differs from the main request in that it has no claims that are equivalent to dependent claims 3 and 4. Independent claims 1, 2, 6 and 7 of auxiliary request 1 are identical to claims 1, 2, 8 and 9 of the main request.

Claims 1 and 2 of auxiliary request 1' are identical to claims 1 and 2 of the main request. Dependent claims 3 and 4 of the main request are deleted. Claims 6 and 7 differ from claims 8 and 9 of the main request on account of the additional features "wherein the first reflection enhancing layer is a first layer of reflective material" and "wherein the second reflection enhancing layer is a second layer of reflective material".

IX. The parties put forward the following arguments:

**(a) Main request: compliance of claim 3 with the requirements of Article 123(2) EPC**

(i) Appellant I

In the context of the application as filed, the expression "decoupled colour-shift region" means a region that has the layer structure such that the absorber layer, the optical spacer layer and the reflector layer overlap a part of the first surface of the substrate not having the relief structure in the first region (see page 7, lines 1 to 4). Likewise, in a "coupled effect region" the absorber layer, the optical spacer layer and the reflector layer overlap the relief structure in the first region (see page 5, line 33 onwards). The critical issue is whether the application as filed discloses a combination of coupled and decoupled colour-shift regions in the same device. The opposition division overlooked the fact that the original claim 55 was dependent on "at least claim 33", not only on claim 33. This wording implies that dependency on any of the other claims, including claims 54 and 43, is also possible as long the features of at least claim 33 are provided. Therefore, the combination of the features of the original claims 55, 54 and 43 is directly and unambiguously disclosed. Even if the expression were considered to be equivalent to "according to claim 33", it is clear from the description and the drawings that the features of these claims are disclosed in combination; see also the headnote of decision T 2619/11. The opposition division failed to consider what is really disclosed in the following places:

- The original claim 55.
- Page 5, lines 27 to 31, which makes it clear that the various effects can be combined, the "or" necessarily being inclusive in this context. A "pure reflective effect" is a decoupled reflective effect; see page 1, line 21 onwards.
- Page 5, line 33 to page 6, line 6, which refers to a coupled effect region.
- Page 6, lines 8 to 14, which reads that the colour-shift effect may "also" (not "alternatively") be provided in addition to the coupled effect described on page 5, line 33 to page 6, line 6. The "or" must be inclusive.
- Page 6, lines 28 and 29, which would not make sense if the effects were mutually exclusive because the word "solely" would be redundant. This passage provides an implicit but direct and unambiguous disclosure of the claimed combination.
- Page 8, lines 29 to 31, which refers to the combination of a coupled region with decoupled regions.

Therefore, the combination of a coupled effect region and a decoupled colour-shift region is disclosed in the description and the embodiments shown in the figures. The embodiments in Fig. 5 to 11 show this combination. The embodiment in Fig. 5 and 6 features a region in which the absorber layer 30, spacer layer 40, and reflector layer 50 overlap the reflection enhancing layer 20 where it is provided on the relief structure (central region 1a). There is a coupled effect region in which the absorber layer 30, spacer layer 40, and reflector layer 50 overlap the relief structure where it does not have the reflection enhancing layer 20 (region 1b). This corresponds to the coupled effect region that was the subject of the original claim 54 (now claim 3). The reflection enhancing layer 20

partially overlaps the relief structure. There is a decoupled colour-shift region in which the absorber layer 30, spacer layer 40 and reflector layer 50 overlap a region of the substrate having neither the relief structure nor the reflection enhancing layer (region 1c). This corresponds to the decoupled colour-shift region in the original claim 55, which was added to claim 2. The above is described on page 27, lines 19 to 25; page 27, line 33 to page 28, line 2; page 28, lines 24 to 28; page 28, line 34 to page 29, line 4; and page 29, lines 13 to 21. The second paragraph on page 9 is clearly optional. Therefore, the embodiment in Fig. 6 explicitly demonstrates the compatibility of the subject-matter of the original claims 55 and 54. Hence, dependent claim 3 does not add subject-matter by virtue of its dependency on claim 2. Further support is found in the embodiment in Fig. 7 and 8, which adds a transparent region 1d. When the application is considered as a whole, it is apparent that the subject-matter of claim 3 does not extend beyond its content.

(ii) Appellant II

Claim 3 does not comply with Article 123(2) EPC. Upon proper assessment, the wording of the original claim 55 is understood by the skilled person to refer back to claim 33. It does not make sense to interpret it as a reference to all other claims. The object of claim 3 is not disclosed in the passages cited by appellant I.

- Page 5, lines 22 to 31 does not disclose the claimed combination because it has "or" instead of "and". It mentions a "pure reflective effect" and refers to page 5, lines 6 to 25, which requires a loss of 60% of incident light. Neither feature is found in claims 1 and 2 of the patent.

- Page 5, line 33 to page 6, line 6 contains two alternatives that are not found in claim 3.
- Page 6, lines 8 to 14 does not disclose the combination ("or" rather than "and") and contains three alternatives.
- Page 6, lines 28 to 31 comprises two alternatives, neither of which is found in claim 3.
- Page 8, lines 29 to 31 merely requires the absorber and reflector layers to have a constant thickness.
- Page 9, lines 13 to 18 is part of a longer paragraph (page 9, lines 6 to 23) including further features that are not found in claim 3.
- The embodiment in Fig. 5 and 6 relates to an embodiment of the invention described on page 27, line 15 to page 29, line 32 of the application as filed. It comprises features which have not been incorporated in claim 3, such as a transparent substrate, the disposition and flat surface of the relief structure, the structuring of the reflection enhancing layer by means of a mask that is then removed by a washing process, an absorber layer that is not substantially opaque or weakly transmissive, and a reflector layer applied over the entire upper surface of the optical spacer layer.

Therefore, claim 3 is based on an inadmissible intermediate generalisation with respect to these embodiments disclosed in the application as filed.

**(b) Admittance of auxiliary request 1**

(i) Appellant I

The filing of this request constitutes an amendment under Article 12(4) RPBA. It should be admitted. There are several factors to be considered in the board's

exercise of discretion (see "Case Law of the Boards of Appeal of the European Patent Office", 10th edition, July 2022, section V.A.4.3.4). The amendment must be identified and reasons must be provided for its timing: the amendment consists in deleting the problematic dependent claims. The proprietor could not have submitted the request in time during the first-instance proceedings. Opponent 1 had objected to dependent claims 4 and 5 (i.e. claims 3 and 4 of the main request) but the arguments were not yet based on the dependency of claim 55 "on at least claim 33". It was only in the submission by opponent 2 on the final day of the period for making written submissions in preparation for the oral proceedings, just before the Christmas period, that the argument was raised. This is acknowledged in the decision under appeal (see section 14.4 of the Reasons). The objection was very different from the objection raised in the notice of opposition (see section 2.6 of appellant II's notice of opposition). The proprietor could not have filed this auxiliary request within the period set for making written submissions and had had no choice but to file these amendments late. By opponent 2 waiting until the last possible day for filing the objection, the patent proprietor was deprived of time to respond and of the opposition division's provisional opinion on that matter. Any submission after the expiration of the time limit for filing an opposition and for responding to it is late in principle. Consequently, appellant II's argument that the submission was filed within the time limit set by the opposition division is not decisive. Moreover, in the letter dated 17 November 2022, the precise nature of the objection was not stated clearly. On the face of it, the allegation made in that letter is plainly factually incorrect: it alleges that claim 55 is dependent on claim 33 only. Since the proprietor



did not attend the oral proceedings, which is not mandatory, it is only in the light of the decision that it has become clear to the proprietor that there was disagreement as to how the wording "according to at least claim 33" should be construed. This is not even properly set out in the decision. The statement of grounds of appeal was the first genuine opportunity for the proprietor to reply to the arguments underpinning the objection.

Complexity of the amendment: the amendment simply deletes two dependent claims and the substantive issues of novelty and inventive step are unchanged.

Suitability for addressing the issue: the deletion of the dependent claims 3 and 4 addresses the objection.

Procedural economy: it does not introduce new issues.

Convergence: should the board decide to uphold the decision on the main request, the proprietor would only intend to rely on auxiliary requests from which these claims are deleted. On the other hand, if the objection were overturned, the proprietor would not intend to rely on any request from which these claims are deleted. Therefore, the admittance of this request does not negatively impact the convergence of the proceedings as a whole.

Finally, discussing the patentability of the subject-matter of claims 1 and 2 at the appeal stage is not purely the consequence of the patent proprietor not attending the oral proceedings before the opposition division. Had the board concluded that the objections of added subject-matter were not founded, the question of whether the subject-matter of claims 1 and 2 is patentable would have had to be examined anyway. In addition, the opposition division could have discussed this question to prepare for the eventuality that its finding of added subject-matter might be overturned on appeal. The patent proprietor had not tried to avoid a

decision in this respect. In view of all of the above, it is appropriate for the board to admit this new auxiliary request in light of the facts of the case.

(ii) Appellant II

The patent proprietor deliberately decided not to participate in the oral proceedings. Even if a new argument had arisen during the oral proceedings on which the decision of the opposition division was ultimately based, it was the decision of the patent proprietor not to exercise its right to be heard in this regard. Endorsing the patent proprietor's argument would contradict the nature of the appeal proceedings. Deliberately not participating in the oral proceedings would make it possible to file further auxiliary requests in the appeal proceedings. Parties are obliged to present all their requests during the first-instance proceedings, if possible, and must not postpone the final discussion of issues to the appeal proceedings. The patent proprietor was duly summoned and was free to decide whether or not to participate in the oral proceedings. In deciding not to attend, it accepted the risk of not being able to respond to any new arguments by filing new auxiliary requests. This conscious decision cannot justify an improvement of the patent proprietor's position in the appeal proceedings (see also decisions T 680/10, T 1867/07 and T 1400/11). If the patent proprietor's line of argument were to be followed, this would ultimately mean that a party would be rewarded for not attending the oral proceedings before the opposition division by being given greater facility under Article 12(4) RPBA to have new requests admitted on appeal. This would negatively affect procedural economy and the appeal proceedings, the proper purpose of which is to review the first-instance

decision. A party's choice not to be represented at oral proceedings cannot justify the shifting of issues which could have been discussed in the oral proceedings before the opposition division, to the appeal proceedings. A party must face the consequences regarding admittance into the appeal proceedings if it deliberately failed to take advantage of the opportunity to discuss the matter in its response to the corresponding submissions. Had appellant I attended the oral proceedings, it could have presented the arguments set out in point 1.1 of its statement of grounds of appeal before the opposition division, and therefore they would have been taken into account in the decision under appeal. It could also have filed amended requests at the oral proceedings before the opposition division. Its choice not to attend the oral proceedings goes against this request being admitted. Moreover, this request being admitted would make it necessary to discuss claims that have not yet been considered or to remit the case to the opposition division. It should also be taken into account that the objection was not raised during the oral proceedings, but had been raised at the beginning of the opposition proceedings. The fact that opponent 2 completed its objection on the last day of the time limit for submissions set by the opposition division cannot be used against it. This is standard practice and does not constitute an abuse of procedure.

When asked by the board whether the need to discuss claims 1 and 2 for the first time on appeal was actually a direct and necessary consequence of the patent proprietor not attending the oral proceedings before the opposition division (because the opposition division and the board could have started the examination of the main request by discussing the

patentability of the subject-matter of claims 1 and 2), appellant II stated that opposition divisions always examine objections of added subject-matter before turning to the question of patentability. This makes sense in terms of procedural economy. It is unrealistic to expect that an opposition division would examine an objection without being required to do so.

**(c) Auxiliary request 1: compliance of claims 6 and 7  
with the requirements of Article 123(2) EPC**

(i) Appellant II

Claim 6 is based on claim 58 of the application as filed. This claim is directed to the production of a layer structure which comprises, among other things, first and second reflection enhancing layers and a first and second layer of reflective material. During the examination procedure, the references to the layers of reflective material were changed to references to reflection enhancing layers. Therefore, the claim no longer requires to provide additional first and second layers of reflective material, and there is also an overlap of layers which was not disclosed in the original claim 58. The same objection applies to claim 7. The view that the terms "reflection enhancing layer" and "layer of reflective material" are synonyms and that it is apparent to the skilled person from the overall context that the first and second reflection enhancing layers are the same layers as the first and second layers of reflective materials is incorrect. The two terms have different technical meanings. The layer is not a "reflection layer" but a "reflection enhancing layer", i.e. a layer that enhances reflection. Nothing else can be concluded from the passage on page 22, lines 29 to 31 of the original application. In this

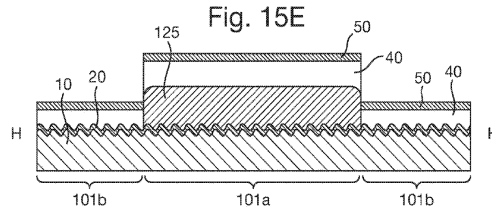
passage, "reflection enhancing layer (20)" and "reflector (50)" refer to two different layers. The passage refers to the embodiment in Fig. 2. In the final product shown in Fig. 2G, two different layers with different functions and properties are referred to as the "reflection enhancing layer (20)" on the one hand and the "reflector layer (50)" on the other; see also page 22, lines 29 to 31, and page 24, lines 15 to 24. Another relevant passage is found on page 4, lines 30 to 32 of the application as filed. According to this passage, the reflection enhancing layer is the layer provided over or on the reflective relief structure to increase reflectivity and improve replay brightness of the relief structure. Therefore, even taking into account the explanations in the description of the patent, the expressions "layer of reflective material" and "reflection enhancing layer" have different technical meanings and are not interchangeable. For instance, a material can be non-reflective as such but have a refractive index that makes it reflective in combination with another material having a different refractive index. In that case, the reflectivity is not a material property but a property of the interface. The amendment fails to comply with Article 123(2) EPC.

When confronted with the possible interpretation that the two expressions were not synonymous but nevertheless designated the same layer, meaning that their combination required the reflection enhancing layer to be made of reflective material, appellant II pointed out that replacing the expression having a narrower scope with one having a broader scope would nonetheless constitute an inadmissible intermediate generalisation.

(ii) Appellant I

Appellant II's argument is not based on a normal reading of the claims as filed. The original claims 58 and 90 both defined a first and a second "reflection enhancing layer". Further on in these claims, they were referred to as the first and second "layer of reflective material". Even if it was not clear from the wording alone that the "first layer of reflective material" was referring to the "first reflection enhancing layer", it is clear in context from the fact that the "first layer of reflective material" is never introduced by an indefinite article. Furthermore, when it is introduced, reference is made to where it overlaps the relief structure. Since the claim has already specified that the first reflection enhancing layer overlaps the relief structure and the interrupting layer, it is clear that this is referring to the same layer of reflection enhancing material that has already been defined. Similar comments apply to the second layer of reflective material. The use of two different expressions was just an error. An inspection of the description also confirms that both expressions are synonymous and refer to the same entity. For example, Fig. 15E shows a substrate 10, reflection enhancing layer 20, interruption layer 125, optical spacer layer 40 and reflector layer 50. These correspond to the "first reflection enhancing layer", "interrupting layer", "optical spacer layer" and "reflector layer" from the original claim 58. There is no further "first reflective layer". Fig. 2G is not presented as an embodiment of claims 8 and 9, since it does not include a feature specified as the interrupting layer. The first embodiment making an explicit reference to an interrupting layer is Fig. 15 (see layer 125 in

Figures 15C to 15E). This embodiment also includes both a reflection enhancing layer 20 and reflector layer 50.



The attempt to suggest that the reflector layer 50 corresponds to the "layer of reflective material" in the original claim wording is misleading, since the reflector layer 50 already maps onto the "reflector layer". There was never any "layer of reflective material" as an additional feature over and above the respective "reflection enhancing layer". Appellant II is reading the claim with a mind desirous of misunderstanding and is attempting to create an added subject-matter objection out of what is clearly a difference in terminology applied to the same features.

When confronted with the possible interpretation that the two expressions were not synonymous but nevertheless designated the same layer, meaning that their combination required the reflection enhancing layer to be made of reflective material, appellant I pointed out that the reflection enhancing layer had to be made of a material that makes it reflective to some extent. Virtually any material is reflective to some extent.

**(d) Admittance of auxiliary request 1'**

(i) Appellant I

Several factors favour this request being admitted. In particular, the amendments are simple and do not alter the relevance of the prior art, and the amendments

clearly address the objection of added subject-matter in view of the board's new claim interpretation by simply reintroducing the terminology that was removed from the claim without raising any new issues. The amendments were filed early in the appeal proceedings, as soon as the opponent raised the objection.

(ii) Appellant II

This request should not be admitted. No such request was filed before the opposition division, nor was it introduced into the proceedings before the board with the patent proprietor's statement of grounds of appeal. Furthermore, the objections under Article 123(2) EPC against claims 8 and 9 of the main request had already been raised in appellant II's notice of opposition (see points 2.3 and 2.4). The argument that, due to the large number of auxiliary requests on file, it did not consider it appropriate to "cover" these objections by means of requests and that this request should therefore be admitted is not conclusive. In opposition proceedings, not all possibilities can be "explored" by means of non-convergent requests. Instead, the patent proprietor must indicate the direction in which the proceedings are to proceed. The large number of auxiliary requests filed therefore cannot constitute an argument for admitting further requests.

**(e) Remittal to the opposition division**

(i) Appellant I

The case should be remitted to the opposition division. This request is justified for several reasons. According to section V.A.9.3.2 a) of "Case Law of the Boards of Appeal of the European Patent Office", 10th



edition, July 2022, issues undecided at first-instance proceedings but which become relevant during appeal proceedings can be a reason for remittal. In particular, remittal is considered by the boards where a first-instance department has issued a decision against a party based solely on one particular issue which was decisive for the case and has not addressed those that were not or on which comments would have been *obiter dicta*. Moreover, the primary purpose of appeal proceedings is to review decisions. In the present case, the first-instance decision has been completely reversed. The patentability of independent claims 1 and 2 now has to be considered. In addition, the interpretation of the claims was modified by the board. Questions of procedural economy can be outweighed by other considerations. Much of the responsibility for any lack of procedural economy would lie with the opponents because of the way they presented their arguments.

When asked by the board whether it would not make sense to discuss the claims on which the opposition division had already decided, appellant I pointed out that it needed to properly reconsider the prior art in view of the amendments. Therefore, remittal was needed.

(ii) Appellant II

Appellant II agreed that the case should be remitted because the amended claims have not yet been examined by the opposition division.

## **Reasons for the Decision**

1. Main request: compliance of claim 3 with the requirements of Article 123(2) EPC

Claim 3 requires the reflection layer of the security device of claim 2 to only partially overlap the relief structure (feature C4). Although the remaining feature C5 ("further comprising a coupled effect region, wherein in the coupled effect region the absorber layer, the optical spacer layer and the reflector layer overlap the relief structure in the first region") is optional, the objection is based on it being present.

The opposition division pointed out that the claims as filed did not unambiguously disclose the combination of features F3-3 ("further comprising a decoupled colour-shift region") and F3-4 of claim 2 ("wherein in the decoupled colour-shift region the absorber layer, the optical spacer layer and the reflector layer overlap a part of the first surface of the substrate not having the relief structure in the first region") with feature C5 of claim 3 because claim 55 as filed (introducing the additional features F3-3 and F3-4) is not dependent on the original claim 54 (which introduces feature C5).

Appellant I's first counter-argument is based on the observation that claim 55 refers to a security device according to "at least" claim 33. Appellant I interprets this to mean that the claim is dependent on any of the preceding claims, provided that it is dependent on claim 33 in any case. The board cannot endorse this interpretation of the claim language. This way of drafting a dependent claim is unusual and does not have

a clear and unambiguous meaning for the person skilled in the art, in accordance with decision T 2619/11 cited by appellant I.

Appellant I also cited several parts of the description in support of claim 3:

- Page 5, lines 27 to 31 discloses that the decoupling of the reflective relief effect from the colour-shift effect obtained using a method having features disclosed on page 2, line 26 to page 3, line 15 (reciting the features of claim 1 as filed) can provide a pure reflective effect (such as a holographic effect) in combination with a colour-shifting effect.
- Page 5, line 33 to page 6, line 6 discloses that the two effects may be provided in a coupled manner by creating a partial region in which there is a relief structure and a colour-shifting structure but no reflection enhancing layer. This encompasses features C4 (only partial overlap of reflection enhancing layer and relief structure) and C5 (overlap of the colour-shifting structure and the relief structure in a region without reflection enhancing layer).
- Page 6, lines 8 to 14 discloses the alternative possibility of decoupling the colour-shift effect from the relief-structure effect. The fact that the adverb "also" is used instead of "alternatively" does not allow the conclusion to be drawn that what is referred to is a combination rather than an alternative. The decoupling is obtained by creating a partial region in which the colour-shifting structure is provided without the relief structure

or reflection enhancing layer. This appears to be similar, though not identical, to features F3-3 and F3-4, according to which a decoupled colour-shift region is provided by choosing an arrangement in which the colour-shifting structure overlaps a part of the substrate in the first region without a relief structure. Thus, the substrate is covered only by the colour-shifting structure and comprises neither a relief structure nor a reflection enhancing layer. This arrangement is not unambiguously envisaged on page 6, lines 8 to 14, which has "or" instead of "and". Again, it cannot be ascertained without doubt that this "or" is inclusive.

- Page 6, lines 28 and 29 states that providing the relief structure only in part of the first surface of the substrate is particularly preferable "where regions exhibiting a (solely) decoupled colour-shift effect are desired, or where purely reflective or transparent regions are desired (i.e. planar regions)." The skilled person would not have considered the presence of the word "solely" in parentheses to constitute an unambiguous, explicit or implicit disclosure of the claimed combination. According to the established jurisprudence, an alleged disclosure can only be considered "implicit" if it is immediately apparent to the skilled person that nothing other than the alleged implicit feature is disclosed, so that the skilled person would inevitably be led to the feature (see "Case Law of the Boards of Appeal of the European Patent Office", 10th edition, July 2022, section I.C.4.3). This is not the case here.
- Page 8, lines 29 to 31 discloses that the absorber layer and/or the reflector layer have substantially

constant thicknesses, meaning that the appearance of the security device is consistent across the coupled and decoupled regions.

Having considered all these passages, the board is unable to discern an unambiguous disclosure of a combination of features F3-3 and F3-4 with feature C5. The passage on page 5, line 33 to page 6, line 14 comes closest to this combination, but the two paragraphs are presented as alternatives. The board is unconvinced that the conjunction "or" is necessarily inclusive in this context. Moreover, the second paragraph does not unambiguously disclose features F3-3 and F3-4.

The embodiments in Fig. 5 to 11 do not provide a direct and unambiguous disclosure of the subject-matter of claim 3 in all its generality either. The fact that several of or even all of the embodiments of an application exhibit a certain feature does not provide a direct and unambiguous teaching that this feature is constitutive of or part of the invention.

The board agrees that the application as filed is compatible with the claimed combination of effects, but this does not amount to a direct and unambiguous disclosure of the combination.

The board also agrees with the view that it is the disclosure of the application as filed as a whole that has to be considered. However, if no part of the application discloses a combination of features, the application as a whole also fails to do so.

In view of the above, the subject-matter of claim 3 extends beyond the content of the application as filed, in violation of Article 123(2) EPC. As it is impossible

to maintain the patent in amended form on the basis of the main request, the latter must be dismissed.

2. Admittance of auxiliary request 1

Appellant I filed this auxiliary request for the first time with its statement of grounds of appeal.

Consequently, the admission of the request is at the board's discretion under Article 12(4) RPBA.

The board notes that

- the auxiliary request differs from the main request decided upon by the opposition division only in that the dependent claims that were found to violate Article 123(2) EPC were deleted,
- the patent proprietor did not respond in writing to the additional arguments filed by opponent 2 on the final date set by the opposition division for making further submissions,
- the patent proprietor chose not to attend the oral proceedings before the opposition division, and
- during these oral proceedings, the opposition division changed its mind regarding the objection of added subject-matter against claims 3 and 4 of the main request.

The patent proprietor's choice not to be represented at the oral proceedings as such is not open to criticism. Opponent 2 filing written observations on the final date set by the opposition division for making further submissions is not objectionable either.

It was argued that auxiliary request 1 should not be admitted because its admission would require the board

to discuss the patentability of the subject-matter of claims 1 and 2 for the first time or to remit the case. Had the patent proprietor chosen to attend the first-instance oral proceedings, it would have filed the request at that time and the opposition division would have had to decide on that matter.

However, the board notes that in the present case the necessity to discuss the patentability of the subject-matter of claims 1 and 2 for the first time on appeal is not exclusively due to the way in which the patent proprietor behaved. The opposition division could have chosen to discuss this matter in order to reduce the risk of a remittal if the board were to overturn its finding of added subject-matter in dependent claims. More importantly, the board could have decided to discuss the patentability of the subject-matter of claims 1 and 2 of the main request (which are the same in auxiliary request 1) before examining the question of added subject-matter regarding dependent claims. The parties had to be prepared for this eventuality. It follows that the parties to the oral proceedings before the board had to prepare their case regarding the patentability of the subject-matter of claims 1 and 2 regardless of whether auxiliary request 1 was admitted.

None of decisions T 680/10, T 1867/07 and T 1400/11 cited by appellant II relates to the absence of a patent proprietor from first-instance oral proceedings and its implications on subsequent appeal proceedings. These decisions are therefore not directly applicable to the case in hand.

In the board's view, current auxiliary request 1, which was filed as soon as the patent proprietor had the opportunity to respond to the decision under appeal,

constitutes a reasonable and appropriate response to the opposition division changing its mind during the oral proceedings before it. It does not raise issues that the parties should not have been prepared to address on appeal. Consequently, the board decided to admit auxiliary request 1 under Article 12(4) RPBA.

3. Auxiliary request 1: compliance of claims 6 and 7 with the requirements of Article 123(2) EPC

Claims 6 differs from claim 58 as filed in that, in several features, the words "layer of reflective material" have been replaced with "reflection enhancing layer".

It was argued that this amendment contravenes the requirements of Article 123(2) EPC.

The opposition division dealt with this objection in point 14.6 of the decision under appeal. According to the opposition division,

*"... it is clear from the wording of the originally filed claims as well as from the original disclosure of the application as a whole that the first and second reflection enhancing layers are the same layers as the first and second layers of reflective materials. The skilled person reading claims 58 and 90 as filed would not assume that four separate layers are provided, but would understand the reference to the first and second reflective material layers to be a reference to the (previously defined) first and second reflection enhancing materials. Indeed, only then do the claims make linguistic and technical sense."*



Appellant II argued that this reasoning was incorrect because the terms "layer of reflective material" and "reflection enhancing layer" clearly have a different technical meaning.

The board endorses the opposition division's reasoning to the extent that the skilled person trying to understand the original claim 58 would have concluded that the references to the first and second layers of reflective materials in claim 58 as filed designate the layers also referred to as first and second reflection enhancing layers in the same claim. Thus the skilled person reading the claim and trying to understand what the drafter meant would have concluded that it refers to two (rather than four) distinct layers.

That being said, the two expressions used in claim 58 are not synonymous. The expression "reflection enhancing layer" defines the layer in terms of its function: the layer must be such that it enhances reflection. The expression "layer of reflective material" defines the layer in terms of its composition: the layer must be made of a material that is, as such, reflective. The fact that the two expressions are not synonymous can be understood by considering that reflectivity is not necessarily a result of the material as such being reflective. Reflection can also be obtained by modulating the refractive index of materials that are, as such, transparent. In this case, reflection is a property of the interface between two or more materials. Claim 58 requires the layers under consideration both to be reflection enhancing and to be made of reflective materials.

Consequently, the amendment consisting in replacing all the references to a "layer of reflective material" with

references to a "reflection enhancing layer" has the effect of broadening the scope of the claim because the amendment results in the layer only being required to be reflection enhancing, regardless of whether or not it is made of a reflective material.

The argument that virtually any material is reflective is unpersuasive because it is tantamount to saying that the feature requires the layer to be made of any material, which is technically meaningless. This is not how the skilled person would have understood the feature. "Reflective material" is understood to designate a material exhibiting significant reflection.

Incidentally, page 4, lines 16 and 17 of the application as filed refers to "a partially reflective material (typically Chrome or a Nickel Chrome alloy with a thickness of 5nm)". The drafter deemed it necessary to provide an example, which would not have been necessary if any material would have sufficed.

The argument that the wording of the original claim 58 was the result of an obvious error (meaning that the amendment constitutes the correction of such an error) is unpersuasive. But even if this were the case, the correction could not be granted; the condition that it must be immediately evident that nothing else would have been intended than what is offered as the correction (see "Case Law of the Boards of Appeal", 10th edition, section II.E.4.2) is not fulfilled. This discrepancy could also be due to the unintended omission of the proper introduction of the layers of reflective material.

Therefore, the board concludes that claim 6 of auxiliary request 1 violates Article 123(2) EPC. The same

reasoning also applies, *mutatis mutandis*, to claim 7, which is based on claim 90 of the application as filed. Consequently, it is not possible to maintain the patent in amended form on the basis of auxiliary request 1. It follows that auxiliary request 1 must be dismissed.

4. Admittance of auxiliary request 1'

The examination of the main request and auxiliary request 1 during the oral proceedings before the board has led the board to a new interpretation of the claimed subject-matter. It is uncontested that the amendments of claims 6 and 7 of auxiliary request 1' directly address appellant II's objections under Article 123(2) EPC against these claims as now interpreted by the board. Moreover, the set of claims of auxiliary request 1' had already been filed as auxiliary request 33 with appellant I's reply. The board has decided to admit auxiliary request 1' to give appellant I the opportunity to respond to the new situation on the basis of a request already submitted at the outset of the appeal proceedings.

5. Remittal to the opposition division

Since both parties have requested remittal of the case, the board considers it appropriate to grant this request and to remit the case to the opposition division for further prosecution in application of Article 111(1) EPC and Article 11 RPBA.

## Order

### For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division for further prosecution.

The Registrar:

The Chairman:



N. Schneider

P. Lanz

Decision electronically authenticated