Internal distribution code:

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

Datasheet for the decision of 15 May 2025

Case Number: T 0995/23 - 3.2.05

Application Number: 16777746.5

Publication Number: 3356155

IPC: B42D25/24, B42D25/29, B42D25/351, B42D25/373, B42D25/378, B42D25/45

Language of the proceedings: EN

Title of invention:
Security print media and method of manufacture thereof

Patent Proprietor:
De La Rue International Limited

Opponent:
CCL Secure Pty Ltd

Relevant legal provisions:
EPC Art. 56, 100(a), 100(b)
RPBA 2020 Art. 13(2)

Keyword:
Amendment after summons - taken into account (no)
Grounds for opposition - lack of inventive step (no) - insufficiency of disclosure (no)

Decisions cited:
T 2290/12, T 2361/17

Europäisches Patentamt
European Patent Office
Office européen des brevets

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

Case Number: T 0995/23 - 3.2.05

D E C I S I O N
of Technical Board of Appeal 3.2.05
of 15 May 2025

Appellant: (Opponent)	CCL Secure Pty Ltd Potter Street Craigieburn VIC 3064 (AU)
Representative:	Lincoln IP 4 Rubislaw Place Aberdeen AB10 1XN (GB)
Respondent: (Patent Proprietor)	De La Rue International Limited De La Rue House Jays Close Viables Basingstoke, Hampshire RG22 4BS (GB)
Representative:	Gill Jennings & Every LLP The Broadgate Tower 20 Primrose Street London EC2A 2ES (GB)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 23 February 2023 rejecting the opposition filed against European patent No. 3356155 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman	P. Lanz
Members:	M. Holz
	B. Burm-Herregodts

Summary of Facts and Submissions

I. The opponent (appellant) filed an appeal against the opposition division's decision rejecting the opposition against European patent No. 3 356 155 (the patent).

II. The patent proprietor (respondent) filed a reply to the appellant's statement of grounds of appeal including sets of claims of auxiliary requests 1 to 10.

III. The parties were summoned to oral proceedings before the board scheduled for 15 May 2025.

In a communication under Article 15(1) RPBA issued on 6 December 2024, the board provided its preliminary opinion that none of the grounds for opposition raised by the appellant prejudiced the maintenance of the patent.

IV. By letter dated 14 April 2025, the appellant filed further submissions.

V. Oral proceedings before the board were held on 15 May 2025.

VI. The appellant requested that the decision under appeal be set aside and the patent be revoked.

The respondent requested that:
- the appeal be dismissed, implying maintenance of the patent as granted (main request)
- in the alternative, that the decision under appeal be set aside and the patent be maintained as

amended on the basis of one of the sets of claims of auxiliary requests 1 to 10 filed with the reply

VII. The following documents submitted during the opposition proceedings are cited in this decision.

D1: AU 2011101065 A4

D2: EP 2 566 704 B1

D3: WO 97/47478 A1

D4: WO 2005/047013 A2

D5: R.L. van Renesse, "Optical Document Security", Artech House, 3rd edn., ISBN: 1-58053-258-6, 2005, 89-90

D6: B. Hardwick et al., "Guardian™ Substrate As An Optical Medium For Security Devices", Optical Security and Counterfeit Deterrence Techniques III, Proceedings of SPIE, Vol. 3973, 2000

D7: P. Eu et al., "World Polymer Banknotes - A Standard Reference", Eureka Metro Sdn. Bhd., 1st edn., ISBN: 1823-3910, 2005, 122

VIII. Claim 1 of the patent as granted reads as follows (the feature numbering used by the board is included in square brackets).

"**[1A]** *A security print medium (1) for forming security documents therefrom, comprising* **[1B]** *a transparent or translucent polymer substrate (5) having first and second opposing surfaces (5a, 5b), and* **[1C]** *at least one opacifying layer (6a, 6b, 6c, 6d, 6e, 6f, 7) disposed on the first and/or second surfaces (5a, 5b) of the polymer substrate (5),* **[1D]** *the or each opacifying layer (6a, 6b, 6c, 6d, 6e, 6f, 7) being a layer of semi-opaque material, the security print medium (1) further comprising* **[1E]** *a first print (10a)*

of a multi-tonal image disposed on the first and/or second surface (5a, 5b) of the polymer substrate (5), **[1F]** *the print (10a) being covered from the point of view of an observer on a first side of the security print medium (1) by at least one of the opacifying layers (7) which is disposed across the substrate in accordance with a screened working (7a) of the multi-tonal image in alignment with the first print (10a) of the multi-tonal image, the screened working (7a) comprising an array of screen elements,* **[1G]** *whereby when the security print medium (1) is viewed by the observer in reflected light, the screen elements dominate the appearance of the multi-tonal image and when the security print medium (1) is viewed by the observer in transmitted light, the first print (10a) dominates the appearance of the multi-tonal image."*

Claims 2 to 17 of the patent as granted are claims dependent on claim 1 as granted.

Claim 18 of the patent as granted reads as follows.

"*A method of making a security print medium (1), comprising:*
providing a transparent or translucent polymer substrate (5) having first and second opposing surfaces (5a, 5b);
applying a first print (10a) of a multi-tonal image onto the first and/or second surface (5a, 5b) of the polymer substrate (5); and
applying at least one opacifying layer (6a, 6b, 6c, 6d, 6e, 6f, 7) onto the first and/or second surfaces of the polymer substrate, the or each opacifying layer (6a, 6b, 6c, 6d, 6e, 6f, 7) being a layer of semi-opaque material, wherein the first print (10a) is covered from the point of view of an observer on a first side of the

security print medium (1) by at least one of the opacifying layers (7) which is disposed across the substrate in accordance with a screened working (7a) of the multi-tonal image in alignment with the first print (10a) of the multi-tonal image, the screened working (7a) comprising an array of screen elements, whereby when the security print medium (1) is viewed by the observer in reflected light, the screen elements dominate the appearance of the multi-tonal image and when the security print medium (1) is viewed by the observer in transmitted light, the first print (10a) dominates the appearance of the multi-tonal image."

Claim 19 of the patent as granted is dependent on claim 18 as granted.

IX. The parties submitted the following.

(a) *Ground for opposition under Article 100(b) EPC*

(i) *Appellant*

The ground for opposition under Article 100(b) EPC prejudiced the maintenance of the patent as granted. To enable a skilled person to carry out the invention, the patent had to disclose, as a bare minimum, sufficient details on the properties of the relevant inks used to form the opacifying layers and the multi-tonal image, as well as how they should be printed in practice, across the full breadth of the claimed scope. Paragraph [0022] of the patent gave no directions to the skilled person on how to achieve an optimum visual effect other than through experimentation. The mentioning of different parameters in this passage amounted to an invitation to conduct a research programme. Claim 1 as granted encompassed embodiments

other than those addressed in Figures 1(a) to 1(d) and paragraphs [0047] to [0055] of the patent. The skilled person would only have been able to carry out the claimed invention with undue burden. Figures 1(a) to 1(d) and paragraphs [0047] to [0055] of the patent referred to an example which included limitations not included in claim 1 of the patent as granted. This reference did not satisfy the requirement that a person skilled in the art could carry out the invention as defined in the independent claims over the whole scope of the claims without undue burden. The wording of claim 1 as granted did not include any further definition of the opacifying layers or print of a multi-tonal image. As such, claim 1 as granted must be understood to include opacifying layers and print of a multi-tonal image with any reasonable colour or density. The patent would then have to teach how to achieve these reasonable variations within the scope of the claims to be sufficient. Even in the patent, there were four variables of an ink layer, i.e. translucency, colour, brightness and absorbency/optical density, all of which had an effect on light modulation. Accordingly, the teaching of paragraph [0055] of the patent was still solely by reference to the result. The patent described the result that was to be achieved but not how this result could be achieved, i.e. what inks to use, how "dark" they needed to be or actual ink formulations, to make the multi-tonal image more absorbent or be observed differently in reflection. Simply stating that a "conventional colour ink" may be used was not sufficient as conventional colour inks could still vary significantly. Documents D5, D6 and D7 were illustrative of the common general knowledge on shadow images and demonstrated that the skilled person was aware of how to implement shadow images and how to select appropriate inks to be used based on their

properties and the desired shadow-image effect. A particular problem occurred when the screen elements/ opacifying layers were the same colour as the print medium. In reflection, these different layers of the same colour would not be distinguishable, not to mention the requirement that one dominated the other.

Decision T 2361/17 was relevant to the interplay between clarity and sufficiency. In that case, the board had found that a broad claim was not enabled over its entire scope by a limited number of examples that bore no resemblance to numerical limits used to define the boundaries of the claimed invention. It had been argued, unconvincingly, by the patent proprietor that even if the claimed effect was not proven to be implemented at the boundaries of the claim, a functional limitation (that the feature was "tactile" - which seemed to be analogous to the term "dominate(s)" in the opposed patent) allowed the skilled person to know whether they were within the scope of the claim.

In Figure 5(a) of the patent, there were four opacifying layers 7, 6e, 6c, 6a and a single printed layer of multi-tonal image 10a. If each opacifying layer had an optical density of 0.2, layers 7, 6a, 6c, 6e would have a combined maximum optical density of 0.8 and a transmittance of 16%. These opacifying layers were capable of absorbing up to 80% of the incident light. The patent did not disclose or teach how the print of a multi-tonal image could be printed to modulate the transmitted light even more strongly than the four opacifying layers combined. Nor did the patent disclose how the print of a multi-tonal image had to be arranged such that its multi-tonal effects were not cancelled out or weakened by the opacifying layers such that in transmission it was still able to "dominate",

despite there being multiple opacifying layers. The screen elements of the opacifying layer and the screen elements of the multi-tonal image were expected to be configured in a specific manner to achieve the claimed visual effect. An unanswered question was whether there were any size and spacing requirements for screen elements of the opacifying layers and the print of the multi-tonal image. Documents D2 to D4 each disclosed a configuration which involved overlapping two printed workings, at least one of which was a screened working. If different visual effects were achieved because of a specific screen working used by the claimed invention that was supposedly not disclosed or taught by documents D2 to D4, these details also had to be disclosed in the patent to enable a skilled person to carry out the invention. Otherwise, the claimed invention had to be interpreted broadly enough such that the disclosure of documents D2 to D4 were necessarily relevant and encompassed by the claims.

The term "dominate(s)" was unclear to the extent that the scope of claim 1 could not be understood. Clarity was not a ground for opposition. However, there was an interplay between clarity and sufficiency. The lack of clarity was such that the skilled person was deprived of the promise of the invention. There was no objective test by which the skilled person would know if one image or the other dominated the appearance. The whole scope of the claim was affected. The lack of any kind of objective test also conflicted with the care taken by the patent proprietor to provide objective means to determine objective parameters, such as how to measure optical density using a particular model and configuration of a transmission densitometer.

The term "dominate(s)" in feature 1G meant that the screen elements were visible in reflected light and that the multi-tonal image was visible in transmitted light. This was as close to an objective test as could be inferred. From paragraph [0008] of the patent, it could be derived that the definition in feature 1G that when the security print medium is viewed by the observer in transmitted light, the first print dominated the appearance of the multi-tonal image, meant that when held up to the light to be viewed in transmission, the multi-tonal image of the first print, which was obscured in reflection by the semi-opaque screened working, was revealed and displayed to the viewer by light passing through the security print media. The term "dominate(s)" in feature 1G thus meant that the screen elements were visible in reflection and the first print was visible in transmission. Still, the first print could be visible in reflection, and the screened working could be visible in transmission. If the term "dominate(s)" was construed to mean that one thing overwhelmed the other, this would be a subjective definition as it depended on the subjective perception of the observer. The overwhelming effect was only mentioned in a preferred embodiment in paragraph [0055] of patent. Paragraph [0008] of the patent provided a more general understanding of the term "dominate(s)".

These arguments applied to claims 1 and 18 of the patent as granted.

(ii) *Respondent*

The ground for opposition under Article 100(b) EPC did not prejudice the maintenance of the patent as granted. Paragraph [0022] of the patent disclosed that, for example, the layer's coverage, optical density and

colour are relevant parameters for achieving the desired optical effect. Paragraph [0055] of the patent indicated that the modulation of light passing through the security medium by the print working and by the screened working was decisive. The skilled person would have understood from the principles set out in paragraph [0055] of the patent that this could be achieved by allowing a modulation of light by the print that overwhelmed any modulation by the opacifying layers. The skilled person would have understood that the described optical effect could thus be achieved if the print were even more optically dense than the combination of opacifying layers, for example, if it were substantially entirely opaque.

The common meaning of the term "dominate(s)" was that one thing overwhelmed the other. The skilled person would have interpreted this term in claims 1 and 18 as granted in this way. This interpretation was supported by paragraph [0055] of the patent and was also consistent with paragraph [0008] and other passages of the patent.

(b) *Ground for opposition under Article 100(a) EPC in conjunction with Article 56 EPC*

(i) *Appellant*

The subject-matter of claim 1 of the patent as granted did not involve an inventive step in view of a combination of document D1 and any of documents D2, D3 and D4. Document D1 did not disclose features 1F and 1G. The formulation of the objective technical problem used in the decision under appeal was correct. Documents D2, D3 and D4 were in the technical field of security devices, i.e. in the same technical field as

document D1. There was no functional difference between an integrated security feature as in document D1 and stand-alone security devices. In both cases, layers were printed on a substrate. Each of these documents disclosed the provision of a layer comprising a screened working that was concealed in reflection but visible in transmission. The solution according to claims 1 and 18 as granted was suggested in:

- document D2 (paragraphs [0005], [0006] to [0009], [0011], [0014], [0016], [0017], [0022], [0030] and [0032] and Figure 2)
- document D3 (the abstract; claim 1; page 3, line 36 to page 4, line 15; page 5, lines 18 to 29; page 14, lines 30 to 37 and Figure 2)
- document D4 (page 2, lines 5 to 10; page 3, lines 19 to 25; page 6, lines 32 to 36 and page 7, lines 2 to 5)

Document D1 already disclosed a first multi-tonal image which became visible in transmission. However, it did not refer to a screened working. The feature in claims 1 and 18 that the first print and the screened working were of the same multi-tonal image did not relate to a technical feature. Document D1 suggested adding more layers to improve the visual effect and the security. According to page 2, lines 16 to 18 and page 11, lines 22 to 24 of document D1, it was only a preferred option that the first and second images were different. These passages suggested that they could also be provided as appearances of the same multi-tonal image. The fact that document D1 disclosed an image visible in reflection from the second side of the security print medium was irrelevant because this was not excluded from the scope of the claims as granted.

These arguments applied to claims 1 and 18 as granted. The subject-matter of claims 2 to 17 and 19 as granted

did not involve an inventive step in view of document D1 as the starting point in combination with document D2, D3 or D4.

(ii) *Respondent*

The subject-matter of claims 1 to 19 as granted involved an inventive step in view of a combination of document D1 and any of documents D2, D3 and D4. Document D1 did not disclose, *inter alia*, features 1F and 1G. The objective technical problem could be seen as to provide a security print medium with improved security by making it more difficult for a counterfeiter to replicate the security print medium or the resulting security document. Starting from document D1, the skilled person would not have consulted documents D2, D3 and D4. In document D1, the security feature was incorporated in the print medium. In documents D2, D3 and D4, the security devices were applied to the outside of the medium. Applying a screened working over parts of the print medium disclosed in document D1 in which the security feature of document D1 was present would have gone against the aim of document D1. In this document, cut-out sections gave rise to different levels of transparency. These were to exhibit a window-type appearance. Applying a screened working to this structure would have obscured what the observer would see and would have run against the teaching of document D1. Document D1 did not provide a general teaching that adding more layers would be beneficial to improve the visual effect or the security. Instead, specific types of layers, such as a security layer or a coloured layer, were provided for specific purposes. None of documents D2, D3 or D4 disclosed or suggested features 1F and 1G. The skilled person starting from document D1, even if consulting

document D2, D3 or D4, would not have been prompted to add a security device to the exterior of the medium at the same position where the integrated security feature was located.

The appellant's submission that the feature in claims 1 and 18 that the first print and the screened working were of the same multi-tonal image did not relate to a technical feature was an amendment to the appellant's appeal case. It should not be admitted pursuant to Article 13(2) RPBA.

Reasons for the Decision

1. Ground for opposition under Article 100(b) EPC

1.1 In point 3 of the Reasons of the decision under appeal, the opposition division concluded that the ground for opposition under Article 100(b) EPC did not prejudice the maintenance of the patent as granted.

1.2 The appellant contested this view and submitted that the term "dominate(s)" (see feature 1G) gave rise to a lack of sufficiency of disclosure.

1.3 A successful objection of insufficient disclosure presupposes that there are serious doubts, substantiated by verifiable facts (see also "Case Law of the Boards of Appeal of the European Patent Office", Tenth edn., July 2022 (Case Law), II.C.9). In *inter partes* proceedings, the burden of proof initially lies with the opponent, who must establish, on the balance of probabilities, that a skilled person reading the patent, using common general knowledge, would be unable to carry out the invention. If the opponent has

discharged its burden of proof and conclusively established the facts, the patent proprietor bears the burden of proving the alleged facts.

1.4 The appellant submitted that to enable a skilled person to carry out the invention across the full breadth of the claimed scope, the patent had to disclose, as a bare minimum, sufficient details on the properties of the relevant inks used to form the opacifying layers and the multi-tonal image, as well as how they should be printed in practice.

However, it is a common task of the relevant skilled person to select inks and methods for applying these inks to a security document. Paragraph [0022] of the patent suggests that the layers' coverages, optical densities and colours are relevant parameters for achieving the desired visual effect. These are parameters that the relevant skilled person commonly uses to arrive at a desired appearance of a security device. Paragraph [0055] of the patent indicates that the modulation of light passing through the security medium by the print working and by the screened working is decisive. Although claim 1 as granted covers embodiments other than those addressed in Figures 1(a) to 1(d) and paragraphs [0047] to [0055] of the patent, the appellant's submissions do not give rise to serious doubts that the skilled person reading the patent and using their common general knowledge is able to put the claimed invention into practice.

Nor do the appellant's submissions allow the conclusion that the skilled person would only be able to carry out the claimed invention with undue burden. Even assuming that known inks differ in the four parameters indicated by the appellant (translucency, colour, brightness and

absorbency), it is a common task of the relevant skilled person to select inks based on their properties and the visual effect sought. There is no reason to assume that for the case at hand this selection would only be possible with undue burden. While feature 1G defines a functional feature of the claimed security print medium, there are no serious doubts that the skilled person reading the patent and using their common general knowledge would be able to put the claimed invention into practice. Nor has the appellant convincingly shown that the skilled person would have had to carry out an extensive research programme to arrive at parameters that would have allowed them to carry out the invention defined in the independent claims.

1.5 The appellant also submitted documents D5, D6 and D7 as illustrative of the common general knowledge on shadow images. According to the appellant, these documents demonstrated that the skilled person was aware of how to implement shadow images and how to select appropriate inks to be used based on their properties and the desired shadow-image effect.

However, the alleged common general knowledge on shadow images does not put the skilled person's ability to implement the claimed invention into question.

1.6 The appellant submitted that a particular problem occurred when the screen elements or opacifying layers were the same colour as the print medium. In reflection, these different layers of the same colour would not be distinguishable, not to mention the requirement that one dominated the other.

However, even assuming that this was correct, this would imply that arrangements in which the opacifying layers are the same colour as the print medium do not meet the requirements specified in feature 1G. Such arrangements would consequently not be embodiments of the invention defined in claim 1 as granted. The question of whether the skilled person could put such arrangements into practice is therefore less relevant.

1.7 The appellant referred to decision T 2361/17. In point 2 of the Reasons of that decision, the board addressed the question of admittance of the main request and concluded that the patent did not provide the skilled person with an enabling disclosure of how to obtain a security document with a printed security feature with a tactile feel comprising a printed layer with particles protruding by between 20 and 40 µm.

The cited decision is not relevant to the issues at hand. The claims of the opposed patent as granted do not refer to a "tactile feel". Nor has the appellant convincingly shown that this expression was "analogous" to the term "dominate(s)" in the claims as granted. The appellant also submitted that the board in decision T 2361/17 found that a broad claim was not enabled over its entire scope by a limited number of examples that bore no resemblance to numerical limits used to define the boundaries of the claimed invention. The current board cannot find this finding in the cited decision. Moreover, in the case at hand, claims 1 and 18 as granted do not use numerical limits to define the claimed subject-matter. This view is not altered by the fact that a specific security print medium showing the visual effect defined in feature 1G may be described in terms of parameters having specific numerical values.

1.8 The appellant also referred to Figure 5(a) of the patent and submitted that there were four opacifying layers 7, 6e, 6c, 6a and a single printed layer of multi-tonal image 10a. If each opacifying layer had an optical density of 0.2, layers 7, 6a, 6c, 6e would have a combined maximum optical density of 0.8 and a transmittance of 16%. These opacifying layers were capable of absorbing up to 80% of the incident light. The patent did not disclose or teach how the print of a multi-tonal image may be printed such that it modulated the transmitted light even more strongly than the four opacifying layers combined. Nor did the patent disclose how the print of a multi-tonal image had to be arranged such that its multi-tonal effects were not cancelled out or weakened by the opacifying layers such that in transmission it was still able to "dominate", despite there being multiple opacifying layers.

However, the skilled person understands from paragraph [0055] of the patent that this can be achieved by allowing a modulation of light by the print that overwhelms any modulation by the opacifying layers. The skilled person understands that the described visual effect may thus be achieved if the print is yet more optically dense than the combination of opacifying layers, for example, if it is completely opaque. There are no serious doubts that the skilled person applying the common general knowledge would have been able to carry out the embodiment described in the patent based on the details given in the patent. In view of the common general knowledge and the identification of the relevant parameters and principles in the patent, there are no serious doubts that the skilled person would have been able to implement the invention defined by the independent claims as granted in the whole range of the claims.

Moreover, the mere submission that the patent did not disclose all the details on how the visual effect defined in feature 1G is achieved in this example in itself does not give rise to serious doubts that the skilled person, using their common general knowledge, is able to put that embodiment into practice. Nor does the question, raised by the appellant, of whether there are any size and spacing requirements for screen elements of the opacifying layers and the print of multi-tonal image give rise to such serious doubts.

1.9 The appellant submitted that if visual effects different from those disclosed in documents D2, D3 and D4 were achieved because of the screened working used by the claimed invention, those details would be required to be disclosed in the patent to enable a skilled person to carry out the invention. Otherwise, the claimed invention had to be interpreted broadly enough such that the disclosure of documents D2, D3 and D4 were necessarily relevant and encompassed by the claims.

The question of whether the skilled person upon reading the patent and using their common general knowledge is able to put the invention defined in claim 1 or 18 into practice is different from whether the claimed invention is rendered obvious by the cited prior art. This also holds true in view of the functional definition in feature 1G. The question of whether the skilled person is aware of how to achieve the function defined in feature 1G when reading the patent and using common general knowledge is different from whether providing this function was rendered obvious by the cited prior-art documents.

1.10 The appellant set out that the term "dominate(s)" was unclear to the extent that the scope of claim 1 could not be understood. There was no objective test by which the skilled person would know if one image or the other dominated the appearance. This term was unclear.

As accepted by the appellant, a possible lack of clarity is not a ground for opposition. Moreover, even if assuming that the appellant's view was correct, this would imply at most that the skilled person would not know whether a given arrangement falls within the scope of the claims. However, this in itself does not mean that the skilled person would not be able to carry out the claimed invention. In this regard, the board considers that the definition of the "forbidden area" of a claim is not to be considered a matter related to Article 100(b) EPC (see also Case Law, II.C.8.2). This is not to say that a lack of clarity cannot result in an insufficient disclosure of the invention (see also T 2290/12, point 3.1 of the Reasons). However, in the case at hand, the appellant has not convincingly demonstrated that the term "dominate(s)" used in claims 1 and 18 as granted would have caused a lack of clarity giving rise to a lack of sufficiency of disclosure or affecting the whole scope of the claims.

Nor does the alleged lack of definition in the patent of how to measure the optical density using a particular model and configuration of a transmission densitometer give rise to serious doubts. The claims do not specify that an optical density is to be measured or give specific numerical values.

1.11 The respondent submitted that the ordinary meaning of the term "dominate(s)" was that one thing overwhelmed the other. The skilled person would have interpreted

this term in claims 1 and 18 as granted in this way. This interpretation was supported by paragraph [0055] of the patent and was also consistent with paragraph [0008] and other passages of the patent.

The appellant took the view that feature 1G meant that the screen elements were visible in reflected light and the multi-tonal image was visible in transmitted light. This was as close to an objective test as could be inferred. This interpretation was supported by paragraph [0008] of the patent. Paragraph [0055] of the patent only referred to a preferred embodiment of the invention whose features could not be understood to limit the claimed scope.

The board considers that the term "dominate(s)" in claims 1 and 18 implies that the screen elements and the first print do not have equal visibility but that one overwhelms the other under the conditions specified in the claims.

This view is consistent with the skilled person's common understanding of the term "dominate(s)" and is furthermore consistent with the disclosure of the patent, in particular, paragraphs [0008] and [0055]. The term "dominate(s)" in claims 1 and 18 as granted necessarily implies that the screen elements are visible in reflected light and that the first print is visible in transmitted light. This is a necessary but not sufficient condition for the screen elements and the first print overwhelming the other under the conditions specified in the claims. The last sentence in paragraph [0008] of the patent is thus consistent with the above view since it states a necessary implication of the definition in feature 1G that, when the security print medium is viewed by the observer in

transmitted light, the first print dominates the appearance of the multi-tonal image. However, there is no reason to assume that the skilled person would have understood the last sentence in paragraph [0008] of the patent to provide a definition of the term "dominate(s)" used in the claims.

The appellant submitted that if the term "dominate(s)" was construed to mean that one thing overwhelmed the other, this would be a subjective definition as it depended on the subjective perception of the observer.

If the latter was true, this could imply that the claims do not clearly define the matter for which protection is sought (i.e. the "forbidden area" of the claims). Yet, this in itself would not give rise to serious doubts that the skilled person would be able to carry out the claimed invention (see above).

1.12 The ground for opposition under Article 100(b) EPC does therefore not prejudice the maintenance of the patent as granted.

2. Ground for opposition under Article 100(a) EPC in conjunction with Article 56 EPC

2.1 In point 5 of the Reasons of the decision under appeal, the opposition division concluded that the ground for opposition under Article 100(a) EPC in conjunction with Article 56 EPC did not prejudice the maintenance of the patent as granted.

The appellant contested this view and submitted that the subject-matter of claim 1 as granted did not

involve an inventive step in view of a combination of document D1 and any of documents D2, D3 and D4.

2.2 It is common ground between the parties that document D1 does at least not disclose features 1F and 1G.

2.3 Features 1E defines "*a first print (10a) of a multi-tonal image*". Feature 1F defines "*a screened working (7a) of the multi-tonal image*". In other words, the first print and the screened working are of the same multi-tonal image. On page 11 of its letter dated 14 April 2025, the appellant submitted that the definition in feature 1F of a screened working of the same multi-tonal image as the first print (see feature 1E) did not relate to a technical feature. The respondent took the view that this was a new submission that should not be admitted under Article 13(2) RPBA.

The appellant relied for the first time in its letter dated 14 April 2025 on the submission that the feature in claims 1 and 18 that the first print and the screened working were of the same multi-tonal image did not relate to a technical feature. This submission constitutes an amendment to the appellant's appeal case. Article 13(2) RPBA is pertinent. There are no exceptional circumstances justified with cogent reasons by the appellant that justified the admittance of this submission at this stage of the appeal proceedings.

The board thus exercised its decision pursuant to Article 13(2) RPBA by not admitting the above submission in the appeal proceedings.

2.4 In point 5.2.2 of the Reasons of the decision under appeal, the opposition division considered that the

objective technical problem could be seen as to provide a security print medium with improved security by making it more difficult for a counterfeiter to replicate the security print medium or the resulting security document.

In the oral proceedings before the board, the appellant and the respondent agreed to this formulation of the objective technical problem. The board sees no reason to deviate from this formulation of the objective technical problem.

2.5 The appellant referred to documents D2, D3 and D4. Each of these documents disclosed the provision of a layer comprising a screened working that was concealed in reflection but visible in transmission.

2.6 Documents D2, D3 and D4 relate to optical security devices and are thus in the same technical field as document D1. This holds true although the security device of document D1 is integrated into a substrate of a security document and not applied to its surface as envisaged for the security devices of documents D2, D3 and D4. The latter consideration would not have prevented the skilled person starting from document D1 from consulting document D2, D3 or D4.

However, the appellant's submissions are not convincing for the following reasons.

2.7 Regarding features 1F and 1G, the appellant referred to:

- document D2 (paragraphs [0005], [0006] to [0009], [0011], [0014], [0016], [0017], [0022], [0030] and [0032] and Figure 2)

- document D3 (the abstract; claim 1; page 3, line 36 to page 4, line 15; page 5, lines 18 to 29; page 14, lines 30 to 37 and Figure 2)
- document D4 (page 2, lines 5 to 10; page 3, lines 19 to 25; page 6, lines 32 to 36 and page 7, lines 2 to 5)

As set out above, the appellant's view that the term "dominate(s)" in feature 1G only requires that the screen elements be visible in reflected light and that the multi-tonal image be visible in transmitted light cannot be accepted. The term "dominate(s)" in claims 1 and 18 implies that the screen elements and the first print do not have equal visibility but that one overwhelms the other under the conditions specified in the claims.

2.7.1 Document D2 (see paragraph [0005]) discloses that a printed security feature is provided comprising at least a first and a second printed working. The first printed working is a screened working defined by a grid of screen elements having the form of indicia-carrying information. The second printed working is a screened working in register with the first printed working. The first and second printed workings appear, in combination, as a multi-tonal image in which the information carried by the indicia is at least partially concealed by the second printed working. According to the last sentence of paragraph [0022], the second printed working dominates the initial appearance of the image and further assists in concealing the information.

The skilled person understands the latter passage as referring to the appearance in reflection. However, document D2 does not disclose that the first printed

working would dominate the appearance in transmission (see the second part of feature 1G). Even assuming that the first printed working was visible in transmission, this in itself would not allow the conclusion that the first printed working dominates the appearance of the multi-tonal image in transmission, i.e. that it overwhelms the second printed working when the security device is viewed by the observer in transmitted light.

2.7.2 According to, for example, claim 1 of document D3, a security device comprises a substrate having a viewing region which is provided on one side with first indicia and on the other side with second indicia overlying the first indicia. The substrate carrying an obscuring material is aligned with the second indicia to prevent at least the second indicia from being viewed from the one side of the substrate under reflected radiation. The substrate is sufficiently transparent, and the obscuring material permits the passage of sufficient transmitted radiation to allow the second indicia to be viewed from the one side of the substrate under transmission conditions.

The second indicia are thus visible under transmission conditions. However, document D3 does not disclose that the second indicia overwhelm, for example, the first indicia when the security device is viewed by the observer in transmitted light (see the second part of feature 1G).

2.7.3 Document D4 (see, for example, page 1, line 30 to page 2, line 10) discloses a security device comprising a printed or transferred first area having a first colour and a printed or transferred second area having a second colour. The first and/or second area comprises a discontinuous pattern. The first area surrounds the

second area. The first area is distinguishable from the second area. The first area and/or the second area defines an image. A camouflage pattern is provided over the image and an adjacent region surrounding the image. The camouflage pattern has a colour and pattern such that in combination with the first and second areas, it renders the image substantially invisible when viewed under reflected light but visible when viewed in transmission.

However, even assuming that document D4 disclosed the camouflage pattern to be a screened working, the document neither discloses nor suggests that it is a screened working of the same multi-tonal image as the image defined by the first and second areas (see features 1E and 1F). Although claim 1 does not define that the first print and the screened working are identical, features 1E and 1F define that they are of the same multi-tonal image. The skilled person would not have considered the camouflage pattern disclosed in document D4 to be of the same multi-tonal image as the image provided by the layered structure in document D1. Even assuming that the skilled person would have transferred the camouflage pattern of document D4 to the structure of document D1, there was no suggestion to adapt the camouflage pattern to be a screened working of the same multi-tonal image provided by the composite-window security device in document D1.

Nor would they have found any suggestion in this regard in the cited prior art.

The appellant submitted that page 2, lines 16 to 18 and page 11, lines 22 to 24 of document D1 disclosed that it was only a preferred option that the first and second images were different.

However, the cited passages do not suggest that the first and second images disclosed in document D1 are the same. Even more importantly, they do not suggest that if the camouflage pattern of document D4 was added, it should be provided as a version of the same multi-tonal image disclosed in document D1.

2.8 The "could-would approach" (see also Case Law, I.D.5) implies asking not whether the skilled person could have carried out the invention but whether they would have done so in the expectation of solving the underlying technical problem or in the expectation of some improvement or advantage. The question to be answered is whether the skilled person, in the expectation of solving the problem, would have modified the teaching in the closest prior-art document in light of other teachings in the prior art to arrive at the claimed invention. So the point is not whether the skilled person could have arrived at the invention by modifying the prior art, but rather whether, in expectation of the advantages actually achieved (i.e. in light of the technical problem addressed), they would have done so because of prompting in the prior art.

According to the opposition division (see point 5.2.2.3 of the Reasons of the decision under appeal), the fundamental idea behind document D1 is that the security element shows at least three different images, namely two different images visible in reflection from the two sides of the security print medium and a third image differing from these two first images and visible in transmission through the transparent or translucent substrate (see, for example, claim 1 of document D1). Putting an opacifying layer, which is disposed across

the substrate in accordance with a screened working, onto or into the layer structure of the security document of document D1 (for example, onto layer 18 or 28 or between layer 12 and the substrate 10) would have led to a security document where at least one of the images is no longer visible since it would be hidden by the opacifying layer. Putting the opacifying layer onto or into the layer structure of document D1 would thus have gone against the fundamental idea or teaching of document D1.

Indeed, document D1 discloses that, for providing a security document or device that can produce attractive visual effects from different viewing positions that is difficult to reproduce or counterfeit, the security document should produce three images (see, for example, claim 1 of document D1). Based on this disclosure, it would not have been obvious for the skilled person to contemplate modifications of the security document or device disclosed in document D1 that would contradict this teaching of document D1.

The appellant submitted that the fact that document D1 disclosed an image visible in reflection from the second side of the security print medium was irrelevant because this was not excluded from the scope of the claims of the patent.

However, this finding does not alter the above view that document D1 dissuaded the skilled person from any modification that would render one of the three images invisible under all viewing conditions.

Moreover, contrary to the appellant's view, document D1 does not provide a general teaching that adding more layers would be beneficial for improving the visual

effect or the security. The document instead discloses the use of specific types of layers, such as a security layer or a coloured layer, each for specific purposes. This does not amount to a general suggestion of adding any number of arbitrary layers to the structures disclosed in document D1.

The security document of document D1 is based on a composite window in which partially opacifying layers on both sides of the transparent plastics material are omitted in at least one area to form a window area. The window area and a security layer cooperate to produce a first image visible in reflection from a first side, a second image visible in reflection from a second side and a third image visible in transmission from both sides.

Even assuming that documents D2, D3 and D4 disclose the provision of a layer comprising a screened working that is concealed in reflection but visible in transmission, this in itself would not have prompted the skilled person to include a screened working in the security document of document D1 while retaining the stated visual effect. The security devices disclosed in documents D2, D3 and D4 have a structure that is quite different from the one disclosed in document D1, which is based on a composite window. The skilled person would not have isolated one or more layers from the security devices disclosed in documents D2, D3 and D4 and integrated them in the security document of document D1 in the expectation of solving the objective technical problem. This holds even more true since the inclusion of these layers would have interfered with the visual effects provided by the composite-window security device of document D1.

2.9 The subject-matter of claim 1 as granted thus involves an inventive step in view of a combination of document D1 with any of documents D2, D3 and D4. For, *mutatis mutandis*, the same reasons, this also holds true for claim 18 as granted.

2.10 Claims 2 to 17 as granted are claims dependent on claim 1 as granted. Claim 19 as granted is dependent on claim 18 as granted. The subject-matter of dependent claims 2 to 17 and 19 involves an inventive step at least for the same reasons set out above for claims 1 and 18 as granted.

2.11 The ground for opposition under Article 100(a) EPC in conjunction with Article 56 EPC does not prejudice the maintenance of the patent as granted.

3. **Conclusion**

Since none of the grounds for opposition raised by the appellant prejudices the maintenance of the patent as granted, the appeal has to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

N. Schneider P. Lanz

Decision electronically authenticated