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**Datasheet for the decision  
of 27 April 2016**

**Case Number:** T 2099/11 - 3.2.05

**Application Number:** 02078833.7

**Publication Number:** 1266768

**IPC:** B42D15/00

**Language of the proceedings:** EN

**Title of invention:**

Security document with a perforation pattern

**Patent Proprietor:**

INDUSTRIAL AUTOMATION INTEGRATORS (IAI) B.V.  
Sdu Identification B.V.

**Opponent:**

GIESECKE & DEVRIENT GmbH

**Relevant legal provisions:**

EPC 1973 Art. 56

**Keyword:**

Inventive step (yes)



**Beschwerdekammern**  
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Case Number: T 2099/11 - 3.2.05

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.05**  
**of 27 April 2016**

**Appellant:** GIESECKE & DEVRIENT GmbH  
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**Decision under appeal:** **Decision of the Opposition Division of the European Patent Office posted on 15 July 2011 rejecting the opposition filed against European patent No. 1266768 pursuant to Article 101(2) EPC.**

**Composition of the Board:**

**Chairman**            M. Pooock  
**Members:**            O. Randl  
                              G. Weiss

## Summary of Facts and Submissions

- I. The appellant (opponent) filed an appeal against the decision of the opposition division to reject the opposition against the patent No. 1 266 768.

The opposition division had *inter alia* considered the following documents:

D1: WO 98/19869 A1;  
D2: EP 0 853 296 A1;  
D3: WO 95/26274 A1.

- II. Oral proceedings before the board were held on 27 April 2016.

- III. The appellant (opponent) requested that the decision under appeal be set aside and that the European patent be revoked.

The respondent (patent proprietor) requested that the appeal be dismissed.

- IV. The independent claims of the patent as granted read (for claim 1 the feature numbering used by both parties is indicated in square brackets):

"1. [1.1] Forge-proof document (1) comprising a security feature in the form of a perforation pattern [1.2] applied by laser, wherein [1.3] the perforation pattern forms a first image, [1.5] comprising grey tones which are [1.6] obtained by modulation of the density or the width of the perforations characterized in that [1.7] at least some of the perforations (4) forming part of the perforation pattern [1.8] extend at an angle differing from 90° relative to the main plane

of the document (1), and [1.9] comprise extra information in the form of a letter or logo that the angle is chosen such that [1.4] during normal observation of the perforation pattern at a first observation angle of about 90° the first image appears, and that [1.10] during observation at a second observation angle the letter or logo becomes visible."

"5. Method for manufacturing a forge-proof document as claimed in claim 1."

- V. The appellant argued that the subject-matter of each of the independent claims lacked inventive step over the combination of document D2 with D1 or D3, respectively.

In particular, features 1.9 and 1.10 are disclosed in document D2. Figure 11a shows the letter "A" (*cf.* page 8, line 37: "The macro-pattern may be in the form of various signs, numbers, letters ..."). Paragraph [0006] of the opposed patent makes clear that the perforation patterns can also represent an alphanumeric expression.

Paragraph [0008] of the patent discloses an example where two images are arranged at the same position of the carrier but at different angles, such that a stereo image is observable. This shows that the "extra information" does not have to be something different, but can also consist in a slight alteration of the same view. D2 (page 9, line 25) also mentions a stereoscopic image. It is not completely clear whether this image concerns the letter "A" or the picture below, but the answer to this question is not decisive, because what matters is whether it qualifies as "extra information".

The letter "A" of Fig. 11a disappears and then reappears when the card is tilted, as can be deduced from the arrangement of recesses and holes in Figure 10. The reappearance qualifies as "extra information" within the meaning of claim 1 because the letter is then apparent at a different angle.

VI. The respondent pointed out that not all the features of claim 1 were disclosed by documents D1 and D2 in combination; the combination of documents D2 and D3 did not give any hint toward the features of claim 1 either.

In respect of features 1.9 and 1.10 the respondent argued as follows: Document D2 does not disclose that the letter "A" disappears and reappears at a different angle when the plastic card of Figure 11 is tilted. In document D2, the letter "A" is the macro-pattern that is visible to the naked eye. The micro-pattern in the letter "A" is to be viewed by special devices and not visible to the naked eye. Figure 9 of document D2 is only addressing the elements of the micro-pattern, which are not visible without special devices.

But even if document D2 did disclose that the letter "A" disappears and reappears, this would not qualify as "extra information" within the meaning of claim 1. Only the macro-pattern (the letter "A") is visible, the micro-pattern is not. Moreover, the micro-pattern does not have the form of a logo or letter.

As to the stereoscopic image mentioned on page 9, lines 23-25, of document D2, this image is not what is seen by the naked eye, but refers to what would be needed by a potential forger wishing to recreate the pattern.

## Reasons for the Decision

1. The application under consideration was filed on 16 September 2002 as a divisional application to an application filed on 18 January 2000. According to Article 7 of the Act revising the EPC of 29 November 2000 (Special edition No. 4, OJ EPO 2007, 217) and the Decision of the Administrative Council of 28 June 2001 on the transitional provisions under Article 7 of the Act revising the EPC of 29 November 2000 (Special edition No. 4, OJ EPO 2007, 219), Article 56 EPC 1973 applies in the present case.

2. Claim interpretation: "appear" vs. "become visible"; "extra information"

Claim 1 has been drafted using a correspondence or parallelism between a "first image" formed by the perforation pattern, which is apparent when the document is observed at a first angle of about 90°, and "extra information in the form of a letter or a logo" which becomes visible when the document is observed at a second angle that is different from the first angle.

The wording of the claim ("becomes visible"; emphasis by the board) makes clear that the "extra information" is not visible when the document is observed at the first angle.

The question arises whether the "first image" may still be visible when the document is observed at the second angle. The board notes that the claim does not use exactly the same language for the first image, which is said to "appear" at an angle of 90°, and the extra

information, which is said to "become visible" at the second angle. It is true that "become visible" may be used as a synonym for "appear" (the first definition of "appear" in the OED is precisely "to come forth into view, as from a place or state of concealment, or from a distance; to become visible"; underlining by the board) but the semantic range of the verb "appear" goes beyond that meaning and encompasses "to be in sight, be visible", which is the third definition offered by the OED.

The notion of "extra information" also suggests that this information is additional information, i.e. offered in addition to the information conveyed by the first image. Simultaneous display appears to be one straightforward way to offer extra information.

Therefore, the board reaches the conclusion that claim 1 encompasses forge-proof documents for which the first image is visible at the first and the second observation angle whereas the extra information is visible at the second observation angle but not at the first.

The situation where the first image is not visible at the second observation angle is encompassed by claim 1 as well. Even then the information provided by the inclined perforations is additional information because the letter or logo conveys information that is not conveyed by the first image. In other words, the "extra" language may suggest but does not require simultaneousness of display of the first image and the letter or logo when the document is observed at the second observation angle.



3. Inventive step (Art. 56 EPC 1973)

The only question that needs to be answered by the board is whether the subject-matter of claim involves an inventive step over the cited prior art. In order to answer this question, the board will apply the problem-solution approach.

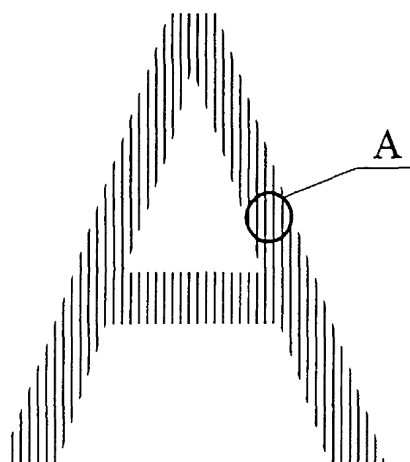
3.1 Closest prior art

The opposition division appears to have considered documents both D1 and D2 as possible closest prior art documents. The appellant has based all its attacks on document D2 as closest prior art and has not contested the finding of the opposition division that claim 1 was inventive over D1 in combination with D2. Therefore, the board has limited its examination to document D2 as closest prior art.

3.2 Differences

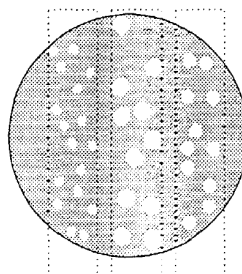
The board has reached the conclusion that the subject-matter of claim 1 differs from the disclosure of document D2 at least by features 1.9 and 1.10

In this context the appellant referred to Fig. 11a of document D2, which is part of the disclosure related to an embodiment in the form of a plastic card.



a

A



b

Fig. 11

The corresponding description of document D2 comprises the following statement:

"... recesses and holes 34 and 35 (Fig. 10a) were formed on the polymer film surface, having the form of solids of revolution. These recesses and holes copies exactly predetermined parameters of the heavy ion space modulation irradiation and UV radiation exposure

(Fig. 10b) including the predetermined slope of recesses and holes at the angle alpha (Fig. 10c and 10d). Thus, the visible macro-pattern (Fig. 11) and the micro-pattern (Fig. 11a) are formed. The macro-pattern may be in the form of various signs, numbers, letters depending on employing masks (Fig. 11a). The micro-pattern (Fig. 11b) is the sets of recesses and holes having a predetermined diameter distribution, a slope to the polymer film surface, and a frequency of the distribution along the surface, for the given carrier." (D2, page 8, lines 33-39).

There was disagreement between the parties as to whether the letter "A" would disappear and subsequently reappear when the plastic card was tilted. As will become clear from what follows, the answer to this question, however, is not decisive for the assessment of inventive step and does not need to be decided upon.

Assuming, for the sake of the argument, that the letter "A" would disappear and subsequently reappear as argued by the appellant, it remains to be seen whether this would provide "extra information" within the meaning of claim 1.

The board has reached the conclusion that the reappearance of an identical letter does not provide extra information. The information conveyed remains the same, i.e. the letter "A". The appellant's argument that the appearance at another angle was surprising and provided extra information because the angle was different is not persuasive. The information conveyed by a letter or logo does not comprise the angle at which the letter or logo is looked at. Whenever a letter or logo is completely visible, it conveys the

information that it intrinsically contains, which is independent of the viewing conditions.

As a consequence, feature 1.9 is not disclosed in document D2. This entails that feature 1.10, which refers to feature 1.9, cannot be disclosed either.

### 3.3 Technical effect / objective technical problem

The technical effect of the use of a logo or letter that becomes visible is not explicitly disclosed in the original application. However, the skilled person would understand that this feature would improve the ease of verification of the security document because a letter or logo is recognised more easily than any arbitrary pattern. The fact that this letter or logo appears at a certain angle would also increase the safety of the document because it would be more difficult to forge.

Consequently, the board is of the opinion that the invention solves the objective technical problem of improving the ease of verification of the security document and the safety of the document.

### 3.4 Obviousness

The appellant has based its entire argumentation on the assumption that features 1.9 and 1.10 are disclosed in document D2. Although the board has expressed a different view in its Communication pursuant to Article 15(1) of the Rules of Proceedings of the Boards of Appeal, the appellant has not provided any reasoning regarding the obviousness of these features. The board has reached the opinion that that features 1.9 and 1.10 are not disclosed in any of documents D1 to D3. Consequently, the board cannot see how a combination of

document D2 with any of documents D1 or D3 could lead the skilled person to a solution comprising those features.

As a consequence, the invention is considered to involve an inventive step within the meaning of Article 56 EPC 1973.

## Order

### **For these reasons it is decided that:**

The appeal is dismissed.

The Registrar:

The Chairman:



D. Meyfarth

M. Poock

Decision electronically authenticated