

**PATENT COOPERATION TREATY**

**TRANSLATION**

From the  
INTERNATIONAL SEARCHING AUTHORITY

**PCT**

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing  
(day/month/year)

Applicant's or agent's file reference  
**K 75 881/7**

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No. <b>PCT/EP2009/067677</b>	International filing date (day/month/year) <b>21.12.2009</b>	Priority date (day/month/year) <b>22.12.2008</b>
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International Patent Classification (IPC) or both national classification and IPC  
**G07D7/16 G07D7/18**

Applicant  
**GIESECKE & DEVRIENT GMBH**

1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/EP	Date of completion of this opinion	Authorized officer
Facsimile No.		Telephone No.

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Box No. I	Basis of this opinion
1.	<p>With regard to the <b>language</b>, this opinion has been established on the basis of:</p> <p><input checked="" type="checkbox"/> the international application in the language in which it was filed</p> <p><input type="checkbox"/> a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).</p>
2.	<p><input type="checkbox"/> This opinion has been established taking into account the <b>rectification of an obvious mistake</b> authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))</p>
3.	<p>With regard to any <b>nucleotide and/or amino acid sequence</b> disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:</p> <p>a. type of material</p> <p><input type="checkbox"/> a sequence listing</p> <p><input type="checkbox"/> table(s) related to the sequence listing</p> <p>b. format of material</p> <p><input type="checkbox"/> on paper</p> <p><input type="checkbox"/> in electronic form</p> <p>c. time of filing/furnishing</p> <p><input type="checkbox"/> contained in the international application as filed</p> <p><input type="checkbox"/> filed together with the international application in electronic form</p> <p><input type="checkbox"/> furnished subsequently to this Authority for the purposes of search</p>
4.	<p><input type="checkbox"/> In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.</p>
5.	<p>Additional comments:</p>

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<b>Box No. V</b>	<b>Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</b>		
<b>1. Statement</b>			
Novelty (N)	Claims	6, 8-12, 14	YES
	Claims	1-5, 7, 13, 15	NO
Inventive step (IS)	Claims	10-11, 14	YES
	Claims	1-8, 12-13, 15	NO
Industrial applicability (IA)	Claims	1-15	YES
	Claims		NO
<b>2. Citations and explanations:</b>			
1	Reference is made to the following documents:		
D1	EP 1 011 079 A1 (TOSHIBA KK [JP]) 21 June 2000 (2000-06-21)		
D2	EP 1 785 951 A1 (NL BANK NV [NL]) 16 May 2007 (2007-05-16)		
D3	US 5 938 334 A (KAYANI SOHAIL [US]) 17 August 1999 (1999-08-17)		
D4	DE 101 39 717 A1 (GIESECKE & DEVRIENT GMBH [DE]) 27 February 2003 (2003-02-27)		
2	INDEPENDENT CLAIM 1		
2.1	The present application fails to comply with the requirements of PCT Article 33(1) because the subject matter of claim 1 is not novel (PCT Article 33(2)).		
	Document D1 discloses (the references between parentheses relate to said document):		
	A method for examining the physical condition of a value document (P1-P4) (abstract; [0001]; paragraph [0012] - paragraph [0014]; paragraph [0019] - paragraph [0020]; paragraph [0028] -		

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paragraph [0030]; paragraph [0034] -paragraph [0041]; paragraph [0044] - paragraph [0046]; paragraph [0064] - paragraph [0065]; paragraph [0069] - paragraph [0070]; paragraph [0076] - paragraph [0084]; paragraph [0087] -paragraph [0092]; paragraph [0108] - paragraph [0120]; figures), with the steps:

- illuminating the value document (P1-P4) with illumination light (e.g. 2),
- recording an image of the value document (P1-P4) by detecting the intensity of the light reflected from the value document (P1-P4) (see, e.g., figure 5b, [45]),
- selecting an image section (e.g., R1 or R2) ([41], [88]) of the recorded image, in which an opaque, reflecting section of the value document (P1-P4) is depicted,
- examining the selected image section is for indications of creases ([45, 64, 65], [89]) which could be present in the opaque, reflecting section of the value document (P1-P4),
- using a result of the examination to evaluate the physical condition of the value document (P1-P4) ([13], [56], [89]).

2.2 The present application furthermore fails to

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comply with the requirements of PCT Article 33(1) because the subject matter of claim 1 is also not novel (PCT Article 33(2)) over D2 and D3 (see the passages cited in the international search report).

3 INDEPENDENT CLAIM 15

3.1 Apart from the lack of clarity raised in Box VII, the present application fails to comply with the requirements of PCT Article 33(1) because the subject matter of claim 1 is not novel (PCT Article 33(2)).

Document D1 discloses (the references between parentheses relate to said document):

A device for carrying out the method according to one or more of the preceding claims (P1-P4) (abstract; paragraph [0001]; paragraph [0012] - paragraph [0014]; paragraph [0019] - paragraph [0020]; paragraph [0028] - paragraph [0030]; paragraph [0034] - paragraph [0041]; paragraph [0044] - paragraph [0046]; paragraph [0064] - paragraph [0065]; paragraph [0069] - paragraph [0070]; paragraph [0076] - paragraph [0084]; paragraph [0087] - paragraph [0092]; paragraph [0108] - paragraph [0120]; figures), with:

- an image sensor (5) for recording an image of the value document (P1-P4) and

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- an evaluation unit (10-13) for examining the selected image section (for example, R1 or R2) for indications of creases which could possibly be present in the opaque, reflecting section of the value document (P1-P4), where the evaluation unit (10-13) is formed in particular for determining the extent of creases in the opaque, reflecting section.

3.2 The present application furthermore fails to comply with the requirements of PCT Article 33(1) because the subject matter of claim 1 is also not novel (PCT Article 33(2)) over documents D2-D4 (see the passages cited in the search report).

4 DEPENDENT CLAIMS 2-9, 12, 13

Claims 2-9, 12, 13 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step. The reason is that the corresponding features are either already known from the cited documented (evaluating light intensities of individual pixels (D1: e.g., [39]); determining the extent of creases (D1: [39,65]); selecting the image section based on the type of value document (D2: claim 10); determining the number of pixels that exceed a threshold value (D1: [39,64]); use of different wavelength ranges (D1: e.g., [27-31]), angle between illumination and detection

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between 10° and 60° (D2: [74]); opaque, reflecting security elements (D1: R1 or R2); diffuse reflection and evaluation of the overshoot of a threshold value (D1: [53,54]) or represent standard features in the area of bank note examination and processing (removal of edge areas).

With regard to 9 it should be pointed out that the features opaque, reflective foil element and metallic foil element are strictly optional and thus have no restricting effect. At the same time it must be noted that an examination of metallized foil elements with regard to creases that are present is not disclosed explicitly in the cited documents. However, claim 9, in the present wording thereof, is not restricted merely to opaque, reflective security elements but is very broad and can, for example, be read to include security printing, security paper itself, watermarks, and so on. (Virtually any security element is reflective since total absorbers are practically not available!).

5           DEPENDENT CLAIMS 10, 11 and 14

As just presented, the examination of metallic foil elements for creases that are present by detecting light that is specularly reflected from the illuminated value document and the determination of the extent of the creases based

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on the number of pixels of the selected image section, the light intensity of which exceeds a threshold value (claim 14) is neither known nor obvious from the available prior art.



Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

- 7 A document that reflects the prior art described on page 1 was not cited in the description (PCT Rule 5.1 a) (ii)).
- 8 Contrary to the requirements of PCT Rule 5.1 a) (ii), the description does not cite documents D1 and D2 or indicate the relevant prior art disclosed therein.
- 9 To facilitate the examination of amended application documents with respect to PCT Article 34(2) (b), the applicant is asked to identify clearly the amendments made, whether by addition, replacement or deletion, and to specify those passages of the application as originally filed that support these amendments (see also PCT Rule 66.8(a)).
- If necessary, these amendments can be made in handwritten form on copies of the relevant parts of the original application.
- 10 The applicant is invited to file the amendments on substitute pages (PCT Rule 66.8 a)).

The applicant is furthermore advised that the examiner in the PCT procedure may make no amendments (PCT Rule 66.8(a)), however minor.

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Box No. VIII      Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

- 11      Claim 15 does not meet the requirements of PCT Article 6 because the subject matter for which protection is sought is not clearly defined. In the claim it is attempted to define the subject matter in terms of the result to be achieved, but in doing so merely states the problem to be solved, without indicating the technical features necessary for achieving this result.