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**Datasheet for the decision  
of 21 June 2021**

**Case Number:** T 1775/16 - 3.5.06

**Application Number:** 10181318.6

**Publication Number:** 2393040

**IPC:** G06K9/00

**Language of the proceedings:** EN

**Title of invention:**

Multispectral imaging biometrics

**Patent Proprietor:**

HID Global Corporation

**Opponent:**

Idemia Identity & Security France

**Headword:**

Multispectral skin biometrics / HID 1

**Relevant legal provisions:**

EPC Art. 100(c), 76(1)

RPBA 2020 Art. 13(1)

**Keyword:**

Grounds for opposition - subject-matter extends beyond content of earlier application (yes)

Amendment to appeal case - suitability of amendment to resolve issues raised (no)

**Decisions cited:**

**Catchword:**



**Beschwerdekammern**  
**Boards of Appeal**  
**Chambres de recours**

Boards of Appeal of the  
European Patent Office  
Richard-Reitzner-Allee 8  
85540 Haar  
GERMANY  
Tel. +49 (0)89 2399-0  
Fax +49 (0)89 2399-4465

Case Number: T 1775/16 - 3.5.06

**D E C I S I O N**  
**of Technical Board of Appeal 3.5.06**  
**of 21 June 2021**

**Appellant:**  
(Patent Proprietor)

HID Global Corporation  
611 Center Ridge Drive  
Austin, TX 78753 (US)

**Representative:**

DTS Patent- und Rechtsanwälte  
Schneckenbühl und Partner mbB  
Marstallstraße 8  
80539 München (DE)

**Respondent:**  
(Opponent)

Idemia Identity & Security France  
2 place Samuel de Champlain  
92400 Courbevoie (FR)

**Representative:**

Regimbeau  
20, rue de Chazelles  
75847 Paris Cedex 17 (FR)

**Decision under appeal:**

**Decision of the Opposition Division of the  
European Patent Office posted on 19 May 2016  
revoking European patent No. 2393040 pursuant to  
Article 101(3) (b) EPC.**

**Composition of the Board:**

**Chairman** B. Müller  
**Members:** T. Alecu  
A. Teale

## **Summary of Facts and Submissions**

- I. The appeal is against the decision of the Opposition Division to revoke European patent number EP 2 393 040 B1 (the patent in suit). The corresponding patent application was filed as a divisional of application EP 05857436.9 (being the subject of appeal case T 1598/18). The notice of opposition raised all grounds of opposition (Article 100(a), (b) and (c) EPC). The decision found the patent as granted (main request) to extend beyond the subject matter of the parent application (Article 100(c) EPC), and found all other requests either to have the same substantive deficiency (under Article 76(1) EPC) or to extend the protection conferred by the patent as granted (Article 123(3) EPC).
- II. With the grounds of appeal, the appellant (patent proprietor) requested that the impugned decision be set aside and that the case be remitted for further prosecution on the basis of the patent as granted, or on the basis of one of two auxiliary requests filed therewith. They also made arguments as to why the impugned decision was wrong and why the new requests were allowable.
- III. The respondent (opponent) requested to "reject the appeal" and "revoke the patent". They argued that the patent in suit violated Article 76(1) EPC, that the first auxiliary request violated Article 123(3) EPC, and that the second auxiliary request violated Article 123(3) EPC and 84 EPC.
- IV. The Board summoned the parties to oral proceedings. In the communication accompanying the summons it informed

the parties of its provisional opinion that the patent as granted extended beyond the subject matter of the parent application, and that that was also the case for the other two requests on file. It was also considered that the second auxiliary request was in breach of Article 84 EPC.

- V. With a submission received on 21 April 2021 the appellant filed three new auxiliary requests (third to fifth) and argued in favor of their admittance and the allowability of all requests.
- VI. The respondent indicated that they would not take part in the oral proceedings and requested to not admit any of the auxiliary requests because they did not comply with Rule 80 EPC, and to not admit any of the last three requests because they were late filed (Article 13 RPBA 2020). Furthermore, all new requests were in breach of Article 123(2) EPC, and the fifth also in breach of Articles 84 and 123(3) EPC. Remittal was requested should the Board find any of the requests allowable under the cited provisions.
- VII. The requests of the parties are as follows:

The appellant (patent proprietor) requests that the decision under appeal be set aside and the case be remitted to the department of first instance for further prosecution on the basis of the main request, i.e. the patent as granted, or of the first or second auxiliary requests filed with the statement of grounds of appeal, or of auxiliary requests III to V, all filed with a letter dated 21 April 2021.

The respondent (opponent) requests that the appeal be dismissed. Should the Board consider that the subject-

matter of one of the requests does not extend beyond the content of the application as filed and does not extend the protection conferred by the European patent, it is requested that the case be remitted to an Opposition Division, as the other grounds for opposition were not yet discussed in opposition proceedings.

VIII. Claim 1 of the main request reads (reference signs removed) as follows:

*"A method of performing a biometric measurement on an individual, the method comprising:*

*illuminating a purported skin site of the individual placed disposed relative to a platen under a plurality of distinct optical conditions during a single illumination session, at least one of the plurality of distinct optical conditions including illuminating the purported skin site with light at an angle ( $\theta_2$ ) greater than a platen-skin site critical angle ( $\theta_c$ ) defined by an interface of the platen with an external environment in the vicinity of the purported skin site and another of the distinct optical conditions including illuminating the purported skin site with light at an angle ( $\theta_1$ ) less than the critical angle ( $\theta_c$ ); and receiving light scattered from an interface of the platen and the purported skin site at an angle ( $\theta_1$ ) less than a platen-skin site critical angle ( $\theta_c$ ) from the purported skin site separately for each of multiple of the plurality of distinct optical conditions to derive a multispectral image of the purported skin site."*

IX. Claim 1 of the first auxiliary request differs from that of the main request in that the last feature has

been amended (insertions underlined and deletions struck through), to:

*receiving light scattered from the purported skin site from an interface of the platen and the purported skin site at an angle less than a platen-skin site critical angle ~~from the purported skin site~~ separately for each of multiple of the plurality of distinct optical conditions to derive a multispectral image of the purported skin site.*

- X. Claim 1 of the second auxiliary request differs from that of the main request in that the last feature has been amended to:

*receiving light scattered from the purported skin site from an interface of the platen and the purported skin site at an angle less than a platen-skin site critical angle ~~from the purported skin site~~ separately for each of multiple of the plurality of distinct optical conditions to derive a multispectral image of the purported skin site.*

- XI. Claim 1 of the third auxiliary request has been amended on the basis of that of the main request to include the features of dependent claims 2 and 3 of the patent in suit.

- XII. Claim 1 of the fourth auxiliary request differs from that of the third in that the feature "receiving light ..." has been amended as follows:

*receiving with an imaging subsystem light, which light is scattered ~~from~~ at an interface of the platen and the purported skin site, wherein the imaging subsystem is oriented at an angle ( $\theta_1$ ) less than a platen-skin site*

*critical angle ( $\theta_c$ ) in order to receive the light,  
wherein the light is received from the purported skin  
site separately for each of multiple of the plurality  
of distinct optical conditions to derive a  
multispectral image of the purported skin site.*

XIII. Claim 1 of the fifth auxiliary request differs from that of the fourth in that the same feature is further amended as follows:

*receiving with an imaging subsystem light, which light is at least scattered at an interface of the platen and the purported skin site by being reflected from a skin surface of the purported skin side [sic] and which light can optionally additionally be scattered within the purported skin side [sic], wherein the imaging subsystem is oriented at an angle less than a platen-skin site critical angle ( $\theta_c$ ) in order to receive the light, wherein the light is received from the purported skin site separately for each of multiple of the plurality of distinct optical conditions to derive a multispectral image of the purported skin site.*

## **Reasons for the Decision**

### The patent in suit

1. The patent in suit relates to multispectral imaging biometrics. A purported skin site (e.g. a fingerprint) is in contact with a platen and irradiated with light under different conditions, and a multispectral image is derived therefrom (paragraph 9).
- 1.1 This multispectral image can be used (pars. 107-117) for e.g. biometric authentication/identification, or for spoof detection. The imaging device can also be



- used for other purposes, such as an input device for a computer (button, touch-pad etc. - see pars. 118-129).
- 1.2 The multispectral image can be obtained by direct imaging (incident light on the platen at an angle less than the critical angle), but also by Total Internal Reflection (TIR) imaging (incidence angle greater than the critical angle). The camera recording the multispectral image is situated generally under the imaged skin site (Figure 1, paragraphs 63-70).

Main request

2. The main request was refused by the Opposition Division because claim 1 of the patent in suit was found to breach Article 100(c) EPC.
- 2.1 Although there were three differences identified with respect to claim 29 of the parent application (Grounds 20), upon which claim 1 of the patent in suit was, according to the proprietor, based, only one of them is relied upon in the decision (Grounds 27 to 33).
- 2.2 The feature in dispute is the last one in the claim, which reads (emphasis by the Board):  
*"receiving light scattered from an interface of the platen and the purported skin site at an angle less than a platen-skin site critical angle from the purported skin site separately for each of multiple of the plurality of distinct optical conditions to derive a multispectral image of the purported skin site."*
- 2.3 In the parent application the underlined passage above was missing.
3. In the opinion of the Opposition Division, and of the respondent, this passage indicates that the origin of the received light (the place of scattering) is the platen-skin interface, this information not being derivable from the parent application.

- 3.1 According to the respondent, there was a distinction to be made between the light scattered at the interface (i.e. close to the surface, shallow scattering), and the light scattered from within the skin (deep scattering), at least in that its polarisation properties were different (paragraph 79 of the parent application, 77 in the patent in suit). The parent application did not disclose "receiving light scattered from an interface of the platen and the skin site", "even less in relation with an angle less than a platen-skin site critical angle" (reply to the grounds of appeal, page 1, bottom and page 3, 2<sup>nd</sup> paragraph).
- 3.2 Contrary to the submissions of the appellant (see below), the claimed wording could only be read as indicating a place of scattering because the wording "scattered from" was always used in that way throughout the (parent) application (reply to the grounds of appeal, page 2).
4. In the opinion of the appellant (grounds of appeal section 3; submissions during oral proceedings), the underlined expression has to be read as only indicating the angle of scattering, and not where the scattering takes place. The expression should be construed in its entirety, i.e. *receiving light scattered from an interface of the platen and the purported skin site at an angle less than a platen-skin site critical angle from the purported skin site*. The place of scattering was defined in the last part of this expression, i.e. *from the purported skin site*, whereas the part in dispute was meant to define the interface plane as a reference for the receiving angle. The appellant indicated paragraphs 13, 17, 20, 23, 30, 34, 88 as using similar language to that effect. Although not exactly the same language is used, the skilled person

would have understood that the formulation had the same meaning.

5. The Board first notes that the patent in suit teaches at paragraph 77 that the light scattered at the interface can be distinguished from the light scattered deep in the skin. In short, the light suffering few scattering events (collisions with matter) is more likely to keep its original polarization, whereas the polarization of light going through multiple scattering events becomes randomized; it follows that the two can be separated using parallel, respectively crossed polarization. Thus the interpretation provided by the opponent is technically reasonable.
6. Secondly, the appellant did not argue that there is a basis in the parent application for granted claim 1, if this interpretation were correct. The Board also does not see an embodiment where the necessary polarization conditions are combined with the rest of the claimed conditions (e.g. TIR and direct imaging).
7. The first argument by the appellant is essentially that the skilled person would read the claim in context, taking account of the language used throughout the application, and would retain the proposed alternative interpretation.
8. The Board is of the opinion that this argument is not supported by the wording used in the description. All the different passages cited by the appellant define the angle and the plane of reference using the following wording: [at an] *angle defined by an interface of the platen with [the skin]*. This is the same wording as is used in the claim to define the light incidence angle. The disputed wording of the

claim is different, stating that light is received *from the interface* at an angle, and this difference must have a meaning.

9. The second line of the argumentation of the appellant (letter in reply to the summons) is that the claim should be *interpreted in a sequential way* to mean that part of the light is scattered at the interface (as construed above) and then part of the light is transmitted into the skin and scattered therein; the claim would define a *temporal condition*.
  
10. This line of argumentation is understood to acknowledge that the claim designates the interface as a place of scattering, but to argue that the claim states that all light is received because the claim wording only describes the physical phenomena. This argument cannot be accepted, because the claim contains no wording to mirror this sequential/temporal interpretation; it defines no sequence of steps (e.g. two receiving events at two different times). Furthermore, the skilled person reading the claim expects the claim features to define claim scope limitations, not to describe physical phenomena which take place irrespectively of the desired scope of protection and consequently cannot limit it.
  
11. The Board is therefore of the opinion that the most reasonable technical meaning that can be imparted to the disputed wording of the claim is that it indicates a condition on the place where the scattering of the received light takes place. More precisely, it imposes a triple condition on the received light: that it is scattered at the purported skin site (in general, cf. original claim 1), that it is scattered more specifically at the interface between the platen and

the skin and that it is received at an angle less than the critical angle.

12. The specification of receiving light from the interface of the platen with the skin (shallow scattering) for all optical conditions is not disclosed in the parent application, as discussed above. It is true that the claim does not specifically exclude receiving light from anywhere else, so that receiving all scattered light, as originally claimed, is still part of the claimed scope. This however cannot change the fact that now the claim specifically defines also a system that can receive light scattered only at the interface, which is a system that the parent application did not disclose. This is new information for the skilled person, and therefore added matter.
13. To summarise, the interpretation proposed by the opponent is a technically convincing claim construction, and this interpretation leads to the conclusion that the patent as granted contains added matter beyond the content of the parent application, in breach of the provisions of Article 100(c) EPC.

First Auxiliary Request

14. The feature in dispute reads in this request (emphasis by the Board):  
*"receiving light scattered from the purported skin site from an interface of the platen and the purported skin site at an angle less than a platen-skin site critical angle ~~from the purported skin site~~ separately for each of multiple of the plurality of distinct optical conditions to derive a multispectral image of the purported skin site"*

which differs from the version of the main request by the shifting of the formulation "from the purported skin site" from after to before the expression in dispute in the main request.

15. The corresponding version was rejected by the Opposition Division for breach of Article 123(3) EPC, considering that it was now clear that the location of scattering was the entirety of the purported skin site.
16. The Board agrees with the appellant (grounds of appeal, section 4) that the meaning of the phrase is not changed with respect to the formulation of the main request; the same three conditions on the received light are still defined (see point 11. above). The respondent's objection under Article 123(3) EPC remains therefore without basis.
17. This also means, however, that claim 1 of this request is in breach of Article 76(1) EPC.

Second Auxiliary Request

18. In this version, the formulation "from the purported skin site" is duplicated to occupy both places, before and after the expression in dispute in the main request. This formulation leads to no apparent change in scope. The appellant did not argue otherwise, in view of the claim interpretation taken for the main request. Claim 1 of this request is therefore in breach of Article 76(1) EPC as well.

Third to fifth auxiliary requests

19. These requests were filed, according to the appellant, as a response to the Board's new claim interpretation in the communication accompanying the summons to Oral Proceedings ("negative limitation").
- 19.1 The third and fourth auxiliary requests specify in more detail the direction of the illumination (TIR conditions) or of the received light. This is meant to clarify that the expression in dispute refers to the light angles, and not the place of scattering.
- 19.2 The fifth request introduces language specifying that *optionally, additionally the light can be scattered within the purported skin site*. This is meant to provide wording to support the sequential/temporal interpretation.
20. Even if these amendments were indeed a reaction to new objections, so that they could be admitted under Article 13(2) RPBA 2020, the board finds that they are not suitable to solve the above identified issue of added matter (Article 13(1) RPBA 2020). Specifying the incidence angle (third and fourth auxiliary requests) cannot help defining the scattering place, because, as already noted above (point 10), the light is anyway scattered also within the skin, whether the claim specifies that or not (fifth auxiliary request), and this holds true even if the light is incident at an angle greater than the critical angle (N.B. this critical angle is that of the platen/air interface, see paragraph 66 of the patent in suit). The requests are therefore not admitted (Article 13(1) RPBA 2020).

**Order**

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

The appeal is dismissed.

The Registrar:

The Chairman:



L. Stridde

B. Müller

Decision electronically authenticated