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Datasheet for the decision of 22 August 2024

Case Number: T 0496/19 - 3.2.05

Application Number: 13184136.3

Publication Number: 2711185

IPC: B41F33/00, G01N21/89, G07D7/00, G07D11/00, B41F33/02, B07C5/342

Language of the proceedings: EN

Title of invention:
Sheet reinspection apparatus, sheet inspection system, and sheet inspection method

Patent Proprietor:
Kabushiki Kaisha Toshiba

Opponent:
Giesecke+Devrient Currency Technology GmbH

Relevant legal provisions:
EPC Art. 56, 83, 84, 123(2)
RPBA Art. 12 (2007)
RPBA 2020 Art. 12(8), 13(2), 15(1), 15(6), 24(1), 25

Keyword:
Inventive step objection - auxiliary request 40 - admitted (yes)
Inventive step - main request and auxiliary request 40 (no)
Late-filed requests 1a, 2a - submitted during oral proceedings before the board - admitted (yes)
Amendments - auxiliary requests 1a, 2a, 3, 4 - allowable (no)
Clarity - auxiliary request 5 (yes)
Unsubstantiated novelty and inventive step objections - auxiliary request 5 - admitted (no)
Sufficiency of disclosure - auxiliary request 5 (no)

Decisions cited:
G 0003/14, T 2091/18

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Case Number: T 0496/19 - 3.2.05

D E C I S I O N
of Technical Board of Appeal 3.2.05
of 22 August 2024

Appellant I: (Patent Proprietor)	Kabushiki Kaisha Toshiba 1-1, Shibaura 1-chome Minato-ku Tokyo 105-8001 (JP)
Representative:	Hoffmann Eitle Patent- und Rechtsanwälte PartmbB Arabellastraße 30 81925 München (DE)
Appellant II: (Opponent)	Giesecke+Devrient Currency Technology GmbH Prinzregentenstraße 159 81677 München (DE)
Representative:	Giesecke + Devrient IP Prinzregentenstraße 159 81677 München (DE)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 13 December 2018 concerning maintenance of the European Patent No. 2711185 in amended form.**

Composition of the Board:

Chairman	P. Lanz
Members:	B. Spitzer
	T. Karamanli

Summary of Facts and Submissions

I. The patent proprietor and the opponent lodged an appeal against the opposition division's interlocutory decision finding that European patent No. 2 711 185 (the patent) as amended according to auxiliary request 40, filed as auxiliary request 4A on 15 October 2018, met the requirements of the European Patent Convention.

II. The opposition was filed against the patent as a whole on the basis of the grounds for opposition under Article 100(a) together with Articles 54 and 56 EPC (lack of novelty and lack of inventive step) and under Article 100(b) EPC.

III. In the decision under appeal, the opposition division found that the disclosure of the invention in the patent was sufficient, that the subject-matter of claim 1 of the main request was novel but lacked inventive step, that claim 1 of auxiliary requests 1, 2, 3 and 4 did not meet the requirements of Article 123(2) EPC, and that auxiliary request 40 met the requirements of the EPC.

IV. The patent proprietor filed notice of appeal on 13 February 2019 and a statement of grounds of appeal on 18 April 2019.

V. The opponent filed notice of appeal on 13 February 2019 and a statement of grounds of appeal on 23 April 2019.

VI. On 4 September 2019, the patent proprietor filed its reply to the opponent's statement of grounds of appeal.

VII. On 9 September 2019, the opponent filed its reply to the patent proprietor's statement of grounds of appeal.

VIII. On 17 August 2021, a summons to the oral proceedings to be held on 19 December 2022 was sent to the parties.

IX. In a communication pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal in the 2020 version (RPBA 2020), issued on 25 October 2022, the parties were informed of the board's provisional opinion.

X. Oral proceedings were held before the board on 19 December 2022.

The patent proprietor filed auxiliary requests 1a and 2a and withdrew auxiliary requests 1 and 2 filed by letter dated 15 August 2018.

The parties' final requests were as follows.

Appellant I (patent proprietor) requested that the decision under appeal be set aside and that the patent be maintained as amended on the basis of the claims of the main request filed by letter dated 15 August 2018 or, alternatively, of one of auxiliary requests 1a or 2a, both filed at the oral proceedings of 19 December 2022, or of auxiliary requests 3 or 4, both filed by letter dated 15 August 2018, or that the opponent's appeal be dismissed, or that the decision under appeal be set aside and that the patent be maintained as amended on the basis of the claims of auxiliary request 5 filed by letter dated 15 August 2018.

Appellant II (opponent) requested that the decision

under appeal be set aside and that the patent be revoked.

At the end of the oral proceedings, the chairman declared the debate closed and informed the parties that the decision would be taken in written proceedings.

The chairman then closed the oral proceedings at 22.36 hrs.

XI. Of the documents cited in the first-instance proceedings, the following are relevant to the appeal proceedings:

D2: EP 2 410 496 A1;
E2: EP 0 302 458 A2;
E5: US 6 012 564;
E12: WO 01/99059 A1;
E15: EP 1 643 460 A1.

XII. Independent apparatus claim 1 of the main request is worded as follows (with the feature numbering used by the opponent in square brackets):

"**[A4.1]** A sheet inspection system (1) comprising:
[A4.2] a sheet processing apparatus (100) comprising:
[A4.3] a first taking unit (113) configured to take in the sheets one by one;
[A4.4] a first conveying unit (115) configured to convey the taken sheets at a first speed;
[A4.5] a first inspection unit (116) configured to inspect the sheets conveyed at the first speed;
[A4.6] a first determination unit (151) configured to determine whether to reject the sheets in accordance with the result of the inspection;

[A4.7] a first counting unit (151) configured to count the sheets which have been determined not to be rejected in accordance with the result of the determination; and
[A4.8] a first output unit (151) configured to output the result of the counting,
wherein the sheet inspection system further comprises
[A1.1] a reinspection apparatus which reinspects rejected sheets rejected from the sheet processing apparatus (100) configured to convey sheets at the first speed, to inspect the conveyed sheet in accordance with a first determination threshold, and to reject the sheets in accordance with an inspection result, the reinspection apparatus comprising:
[A1.2] a taking unit (213) configured to take in, one by one, the sheets rejected from the sheet processing apparatus (100);
[A1.3] a conveying unit (215) configured to convey the taken sheets at a second speed lower than the first speed;
[A1.4] an inspection unit (216) configured to inspect the sheets conveyed at the second speed;
[A1.5] a determination unit (251) configured to determine whether to reject the sheets in accordance with the result of the inspection;
[A1.6] a counting unit (251) configured to count the sheets which have been determined not to be rejected in accordance with the result of the determination; and
[A1.7] an output unit (251) configured to output the result of the counting, wherein
[A1.8] the determination unit (251) comprises a memory (251a) configured to store a second determination threshold having a wider acceptance range than the first determination threshold,
[A1.9] the inspection unit (216) retrieves a detection value from the sheets conveyed at the second speed, and

[A1.10] the determination unit (251) determines whether to reject the sheets in accordance with second determination threshold and the detection value."

Independent method claim 4 of the main request reads as follows:

"A sheet inspection method for use in a sheet inspection system (1) comprising a sheet processing apparatus (100) and a reinspection apparatus (200) which reinspects sheets rejected from the sheet processing apparatus (100), wherein
the sheet processing apparatus (100)
takes in the sheets one by one,
conveys the taken sheets at a first speed,
inspects the sheets conveyed at the first speed,
determines whether to reject the sheets in accordance with the result of the inspection,
counts the sheets which have been determined not to be rejected in accordance with the result of the determination, and
outputs the result of the counting, and
the reinspection apparatus (200)
takes in, one by one, the sheets which have been determined to be rejected by the sheet processing apparatus (100),
conveys the taken sheets at a second speed lower than the first speed,
inspects the sheets conveyed at the second speed in a determination unit (251), determines whether to reject the sheets in accordance with the result of the inspection unit (216),
counts the sheets which have been determined not to be rejected in accordance with the result of the determination, and
outputs the result of the counting, characterized in

that the determination unit (251) comprises a memory (251a) configured to store a second determination threshold having a wider acceptance range than the first determination threshold,
the inspection unit (216) retrieves a detection value from the sheets conveyed at the second speed, and
the determination unit (251) determines whether to reject the sheets in accordance with second determination threshold and the detection value."

XIII. Auxiliary requests

(a) Auxiliary request 1a

Claim 1 of auxiliary request 1a is worded as follows (features added compared with claim 4 of the main request are underlined):

"A sheet inspection method for use in a sheet inspection system (1) comprising a sheet processing apparatus (100), a reinspection apparatus (200) which reinspects sheets rejected from the sheet processing apparatus (100) and a server (300), wherein
the sheet processing apparatus (100)
takes in the sheets one by one,
conveys the taken sheets at a first speed,
inspects the sheets conveyed at the first speed,
determines whether to reject the sheets in accordance with the result of the inspection,
counts the sheets which have been determined not to be rejected in accordance with the result of the determination, and
outputs the result of the counting,
sends the result of the counting to the server, and
the reinspection apparatus (200)
takes in, one by one, the sheets which have been

determined to be rejected by the sheet processing apparatus (100),
conveys the taken sheets at a second speed lower than the first speed,
inspects the sheets conveyed at the second speed in a determination unit (251), determines whether to reject the sheets in accordance with the result of the inspection unit (216),
counts the sheets which have been determined not to be rejected in accordance with the result of the determination, and
outputs the result of the counting, characterized in that the determination unit (251) comprises a memory (251a) configured to store a second determination threshold having a wider acceptance range than the first determination threshold,
the inspection unit (216) retrieves a detection value from the sheets conveyed at the second speed, and
the determination unit (251) determines whether to reject the sheets in accordance with second determination threshold and the detection value,
wherein the reinspection apparatus sends the result of the counting to the server, and wherein the server combines the result of the counting sent by the sheet processing apparatus with the result of the counting sent by the reinspection apparatus and stores the combined results in a storage medium in the server."

(b) Auxiliary request 2a

Claim 1 of auxiliary request 2a is worded as follows (features added compared with claim 1 of auxiliary request 1a are underlined):

"A sheet inspection method for use in a sheet inspection system (1) comprising a sheet processing

apparatus (100), a reinspection apparatus (200) which reinspects sheets rejected from the sheet processing apparatus (100) and a server (300), wherein
the sheet processing apparatus (100)
takes in the sheets one by one,
conveys the taken sheets at a first speed,
inspects the sheets conveyed at the first speed,
determines whether to reject the sheets in accordance with the result of the inspection,
counts the sheets which have been determined not to be rejected in accordance with the result of the determination, and
outputs the result of the counting,
sends the result of the counting to the server together with identification information obtained from a batch card included with the sheets, and
the reinspection apparatus (200)
takes in, one by one, the sheets which have been determined to be rejected by the sheet processing apparatus (100),
conveys the taken sheets at a second speed lower than the first speed,
inspects the sheets conveyed at the second speed in a determination unit (251), determines whether to reject the sheets in accordance with the result of the inspection unit (216),
counts the sheets which have been determined not to be rejected in accordance with the result of the determination, and
outputs the result of the counting, characterized in that the determination unit (251) comprises a memory (251a) configured to store a second determination threshold having a wider acceptance range than the first determination threshold,
the inspection unit (216) retrieves a detection value from the sheets conveyed at the second speed, and

the determination unit (251) determines whether to reject the sheets in accordance with second determination threshold and the detection value, wherein the reinspection apparatus sends the result of the counting to the server together with identification information obtained from a batch card included with the sheets, and wherein the server combines the result of the counting sent by the sheet processing apparatus with the result of the counting sent by the reinspection apparatus and stores the combined results in a storage medium in the server."

(c) Auxiliary request 3

Claim 1 of auxiliary request 3 differs from claim 1 of the main request in that the following feature is added to the end:

"**[A1.13]** wherein the sheet inspection system further comprises a server (300) configured to combine the result of the counting outputted by the first output unit of the sheet processing apparatus with the result of the counting outputted by the output unit of the reinspection apparatus, and wherein the server is configured to store the combined results in a storage medium in the server."

Independent method claim 4 has been amended accordingly.

(d) Auxiliary request 4

Claim 1 of auxiliary request 4 differs from claim 1 of auxiliary request 3 in that feature A1.13 has been amended as follows:

"**[A1.13]** wherein the sheet inspection system further comprises a server (300) configured to combine the result of the counting outputted by the first output unit of the sheet processing apparatus with the result of the counting outputted by the output unit of the reinspection apparatus using the identification information, and wherein the server is configured to store the combined results in a storage medium in the server."

Additionally, features A1.14a and A1.14b have been inserted before feature A1.13 and are worded as follows:

"**[A1.14a]** wherein the sheet processing apparatus is configured to obtain identification from a batch card included with the sheets,"
"**[A1.14b]** wherein the reinspection apparatus is configured to obtain the identification information from the batch card included with the sheets",

Independent method claim 4 has been amended accordingly.

(e) Auxiliary request 40

Claim 1 of auxiliary request 40 differs from claim 1 of auxiliary request 4 in that feature A4.3 has been replaced with feature A4.3a (cited below) and feature A1.2 has been replaced with feature A1.2a (cited below).

"**[A4.3a]** a first taking unit (113) configured to take in the sheets in the form of a bundle with a batch card, including identification information, inserted therein, one by one;"

"**[A1.2a]** a taking unit (213) configured to take in, one by one, the sheets rejected from the sheet processing apparatus (100), the rejected sheets being in the form of a bundle with the batch card inserted therein;"

Moreover, features A1.14a, A1.14b and A1.13 have been replaced with the following wording:

"**[A4.40]** wherein the sheet processing apparatus is configured to obtain identification information from the batch card included with the sheets and to obtain a classification of the sheets,"

"**[A1.40]** wherein the reinspection apparatus is configured to obtain the identification information from the batch card included with the sheets and to obtain a classification of the sheets,"

"**[A4.41]** wherein the sheet inspection system further comprises a server (300)"
"**[A4.42]** configured to combine the result of the sheet processing apparatus with the result of the reinspection apparatus,"
"**[A4.43]** wherein the results respectively include the batch card identification information, the classification of the sheets, the count of the sheets, and the determination result,"
"**[A4.44]** and wherein the server is configured to store the combined results in a storage medium in the server."

Independent method claim 4 has been amended accordingly.

(f) Auxiliary request 5

Claim 1 of auxiliary request 5 has the following features in this order: A1.1 to A1.10 and the new feature "the reinspection apparatus (200) is configured to conduct a reinspection in a normal processing mode in a normal state, and to conduct a reinspection in a check processing mode for sheets which have been rejected in the normal processing mode; and the reinspection apparatus (200) is configured to inspect the sheets with fewer items when operating in the check processing mode than the normal processing mode."

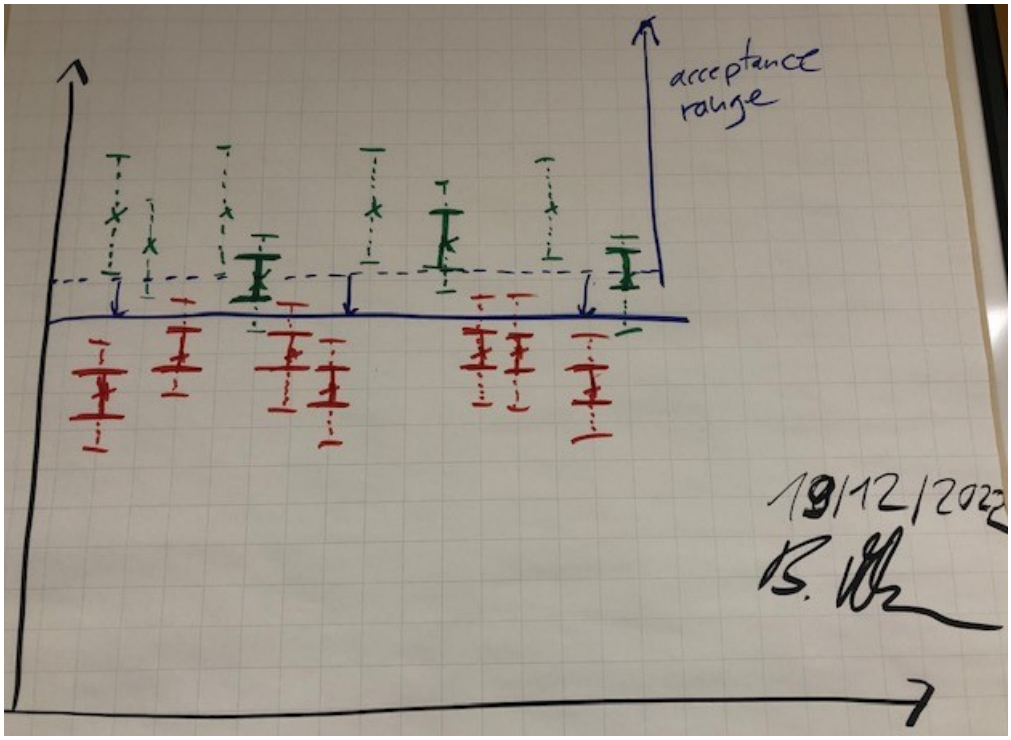
Independent method claim 5 has been amended accordingly.

XIV. The parties' submissions can be summarised as set out below.

(a) Main request - inventive step

(i) Patent proprietor

The gist of the invention was a combined effect of the second speed being lower than the first speed and the second determination threshold having a wider acceptance range than the first determination threshold. This definition was clear to the person skilled in the art. The invention was explained with the aid of the graph reproduced below.



On the y-axis (vertical axis), there was the measured parameter, e.g. the thickness of the sheet, and on the x-axis (horizontal axis), there were the different sheets measured one after the other, i.e. the first sheet, the second sheet, the third sheet and so on. Different thickness values for different fit (cross above the dotted horizontal line) and unfit (cross below the dotted horizontal line) sheets were shown in the graph.

The single values for each sheet had a certain measurement range (standard deviation) due to the accuracy of the sensor and due to the flapping of the sheets when conveying them at a first speed. This deviation was reflected in the graph by dotted vertical bars for each measurement value.

In the sheet processing unit, the thickness of the sheets to be identified as fit sheets had to be above a certain thickness, which was the first determination

threshold. The first determination threshold was shown in the graph as the dotted horizontal line. All sheets having a thickness above this first determination threshold were identified as fit sheets. This was the acceptance range; see the arrow in the direction of the y-axis starting from the dotted horizontal line to infinity. This first determination threshold separated most of the fit and unfit sheets; however, some fit sheets were rejected and not recognised as fit sheets due to the large deviation (see dotted vertical bars for each measurement value) in the first determination.

To raise the accuracy in the second determination, i.e. to reject fewer fit sheets, the speed in the reinspection unit (second speed) was lowered. Since the second speed was lower than the first speed, there was less flapping of the sheets and the deviation of the measurement value was smaller. This was reflected in the graph by bold vertical bars for the second determination which were narrower than the dotted vertical bars for the first determination. Consequently, the second determination threshold (the bold horizontal line) could be lowered compared with the first determination threshold (see the three arrows in the graph pointing downwards). This lowering of the determination threshold led to a wider acceptance range and resulted in the fact that fewer fit sheets were rejected and thus in higher accuracy.

This was how a person skilled in the art interpreted and read the claim. This did not contradict the description, especially paragraphs [0110] to [0118], and the drawings, especially Figures 8 and 9, of the patent since these figures disclosed a special embodiment falling under the scope of claim 1. Reference was made to point 10.2 of the board's

communication under Article 15(1) RPBA 2020.

The subject-matter of claim 1 involved an inventive step starting from document E12. Document E12 did not disclose a relationship between a lower speed and a threshold having a wider acceptance range according to feature A1.8 (see document E12, page 12). Reference was also made to paragraphs [0069], [0101] and [0105] of the patent in suit. Moreover, a second lower speed according to feature A1.3 was only disclosed in document E12 as one option (see document E12, claim 15 and page 12). The technical effect of feature A1.8 was not only to raise efficiency, but also accuracy. Recognising more fit sheets and discarding fewer fit sheets as unfit sheets contributed to higher accuracy and higher efficiency. Both effects were reflected in paragraphs [0019] to [0021], [0118] and in particular [0130] of the patent, i.e. "more easily determined as fit sheets" and "enable more efficient sheet inspection with higher security". Therefore, the objective technical problem to be solved was to provide a sheet inspection system which enabled more efficient sheet inspection with higher accuracy.

Document D2 mentioned a wider acceptance range in the reinspection but at the cost of accuracy (see document D2, paragraphs [0006] and [0089]). Starting from document E12 and looking for a solution to the above-mentioned objective technical problem, the person skilled in the art would not have considered document D2. Even if the person skilled in the art had turned to document D2, it disclosed two options, namely a mere counting mode and a relaxation mode. Furthermore, document D2 did not teach lower speeds for the reinspection. Consequently, the combination of a lower

speed and a wider acceptance range was not obvious from a combination of documents E12 and D2.

The same arguments applied, *mutatis mutandis*, to method claim 4.

(ii) Opponent

There was no definition of a threshold having an acceptance range. The patent proprietor's explanations contradicted the description of the patent (see Figures 8 and 9). The patent did not disclose any relationship between the first and the second threshold, but merely claimed that the second threshold had a wider acceptance range. It was generally known to the person skilled in the art that a lower speed resulted in less flapping of the sheet and consequently in higher accuracy. As disclosed on page 12 of document E12, setting the threshold always required these aspects to be balanced depending on the kind of transport systems, the type of sensors and the speeds.

The subject-matter of claim 1 of the main request was not inventive. The subject-matter of claim 1 differed from document E12 on account of feature A1.8. Feature A1.3 was disclosed e.g. in claim 15 of document E12. The technical effect of feature A1.8 was improved efficiency, as stated in paragraph [0023] of the patent. The higher accuracy was related to the lower speed in the reinspection system (see patent, paragraphs [0020] and [0021]). Therefore, the objective technical problem to be solved was to provide a sheet inspection system which reduced the number of rejected fit sheets.

The person skilled in the art would have taken into

account the teaching of document D2, which, just like document E12, was concerned with inspection and reinspection of sheets (see document D2, paragraphs [0086] and [0087]). To be judged as genuine banknote, the detection values had to be greater than the authenticity judgment threshold (see document D2, column 16, lines 47 to 51). In the reinspection, this threshold was set to be smaller than the first authenticity judgment threshold (see document D2, paragraphs [0028] and [0089]). Although document D2 discloses two options, a mere counting mode and a relaxation mode, the person skilled in the art starting from the reinspection apparatus in document E12, would have turned to the relaxation mode in document D2. The principle of feature A1.8 was explicitly disclosed, and thus the subject-matter of claim 1 was not inventive over a combination of documents E12 and D2. This applied, *mutatis mutandis*, to the subject-matter of method claim 4.

(b) Auxiliary request 1a - admittance

(i) Patent proprietor

The deletion of claims 1 to 4 from auxiliary request 1a compared with the claims of auxiliary request 1 was not an amendment within the meaning of Article 13(2) RPBA 2020 (see Case Law of the Boards of Appeal of the European Patent Office, 10th edition, July 2022, "Case Law", V.A.4.2.2 d)). Therefore, auxiliary request 1a was to be admitted. If it were considered to constitute an amendment, there were exceptional circumstances within the meaning of Article 13(2) RPBA 2020 since the deletion of claims did not change the factual or legal issues in dispute. The discussion was more streamlined since at least some

previous objections were overcome due to the deletion of the apparatus claims.

(ii) Opponent

Auxiliary request 1a was filed late. It could and should have been filed earlier. Therefore, it should not be admitted under Article 13(2) RPBA 2020.

(c) Auxiliary request 1a - added subject-matter

(i) Patent proprietor

Claim 1 of auxiliary request 1a met the requirements of Article 123(2) EPC. Exclusively sending the counting result was directly and unambiguously disclosed on page 35, lines 12 to 14 of the application as originally filed. In this passage, the counting result was equated with the reinspection result. A further basis could be found in claims 1 and 6 as originally filed, in which only the result of the counting was transferred. Although on page 8, lines 4 to 8 all data such as the "*counting result of the sheets, the classification of the sheets, the identification information on the batch card, and the determination result with each bundle of the sheets*" were enumerated, the next paragraph (see page 8, lines 13 to 21 of the application as originally filed) only mentioned the identification information. Consequently, not necessarily all the data were transferred.

(ii) Opponent

Claim 1 of auxiliary request 1a did not meet the requirements of Article 123(2) EPC since, in this claim, only the result of the counting was sent to the

server. The omission of further sent data such as "*the classification of the sheets, the identification information on the batch card, and the determination result with each bundle of the sheets*" constituted an unallowable intermediate generalisation. None of the passages in the application as originally filed concerning a server and the transfer of data was restricted to the transfer of the counting result only; see application as originally filed, page 4, lines 1 to 6; page 4, line 24 to page 5, line 4; page 8, lines 4 to 21; page 35, lines 10 to 23. Claims 1 and 6 as originally filed could not form a basis for the amendment because the claims as originally filed did not include a server, and thus did not include sending data to the server. Page 35, lines 12 to 14 of the application as originally filed did not equate the counting result with the reinspection result since this passage was followed by the statement that e.g. the identification information was included in the reinspection result (see application as originally filed, page 35, lines 15 to 23).

(d) Auxiliary request 2a - admittance

Both parties referred to their arguments which they had put forward with regard to the admittance of auxiliary request 1a.

(e) Auxiliary request 2a - added subject-matter

(i) Patent proprietor

By adding the aspect of sending "*the result of the counting to the server together with identification information obtained from a batch card included with the sheets*", the objection against auxiliary request 1a

was addressed and claim 1 of auxiliary request 2a met the requirements of Article 123(2) EPC. Reference was made in particular to claims 1 and 6 of the application as originally filed as well as to page 4, line 24 to page 5, line 4, page 8, lines 4 to 21, page 26, lines 8 to 16, and page 35 of the description of the application as originally filed. It was disclosed that the associated inspection result included the batch card ID, the classification of the sheets, the number of the sheets, and the determination result. The term "include" did not mean "consist of", and as such examples of the associated inspection result were given.

(ii) Opponent

Claim 1 of auxiliary request 2a still did not meet the requirements of Article 123(2) EPC. It was the associated inspection result which was sent to the server, which included the batch card ID, the classification of the sheets, the number of the sheets, and the determination result (see page 4, line 24 to page 5, line 4 of the application as originally filed).

(f) Auxiliary requests 3 and 4 - added subject-matter

In addition to referring to their oral submissions on the issue of Article 123(2) EPC made with respect to auxiliary requests 1a and 2a, the parties essentially argued as follows.

(i) Patent proprietor

Claim 1 of auxiliary request 3 did not contravene the requirements of Article 123(2) EPC. The opposition division's conclusion under point 36 of the Reasons of

the decision under appeal that the feature relating to the server configured to combine the counting results received from each of the sheet processing apparatus and the reinspection apparatus constituted an unallowable intermediate generalisation was not correct. It would have been clear to the person skilled in the art that the primary objective of the sheet inspection system was to count the number of sheets within a particular category, e.g. fit sheets, genuine sheets, etc. This was clear from claim 1 and claim 5 as originally filed, which recited *"a counting unit configured to count the sheets which have been determined not to be rejected.*"

Claim 1 of auxiliary request 4 did not contravene the requirements of Article 123(2) EPC either. The opposition division's conclusion under section 39 of the Reasons of the decision under appeal that the amended feature constituted an unallowable intermediate generalisation even though the use of a batch card was claimed was not correct. It was clear that the specific elements of the counting such as the classification of the sheets and the determination result were not intrinsically linked to the summation of the count results recited in claim 1.

(ii) Opponent

Claim 1 of auxiliary requests 3 and 4 did not fulfil the requirements of Article 123(2) EPC since, in these claims, only the result of the counting, in auxiliary request 4 supplemented by the identification information, was transferred to the server. In particular, the reference to the classification was omitted. In contrast to the patent proprietor's

arguments, a reasonable combination of the counting results was not possible without this information.

(g) Auxiliary request 40 - admittance of the inventive-step objection based on document E12 in combination with document D2 for the first partial objective technical problem

(i) Patent proprietor

Under Article 12(4) and (2) RPBA 2007, the objection of lack of inventive step against the subject-matter of claims 1 and 4 of auxiliary request 40 in view of document E12 in combination with document D2 was filed late and was not to be admitted. This objection had first been raised by the opponent in its reply in the context of the first partial objective technical problem. The opponent should already have raised this objection in its statement of grounds of appeal in view of Article 12(4) and (2) RPBA 2007. The opponent therefore could not supplement its appeal case in its reply to the other party's statement of grounds of appeal.

(ii) Opponent

The objection of lack of inventive step to the subject-matter of claims 1 and 4 of the main request in view of document E12 in combination with document D2 had been raised in its reply (see opponent's letter dated 6 September 2019, the reply to the patent proprietor's grounds of appeal, page 9, point I.7). Under point VI. of this submission, in which auxiliary request 40 had been discussed, reference was made to the objections raised against the main request under point I. of this submission. Therefore, the objection was part of the

reply and, in accordance with Article 12(2) RPBA 2007, the statement of grounds of appeal and the reply contained its complete case.

(h) Auxiliary request 40 - inventive step

(i) Patent proprietor

The subject-matter of claims 1 and 4 of auxiliary request 40 involved an inventive step in view of document E12 combined with documents D2 and E15.

Document E12 did not disclose a server (feature A4.4.1). The inspection device ("Prüfeinrichtung 30") in document E12 was the inspection unit and not a separate server as claimed in claim 1.

The distinguishing features of claims 1 and 4 over document E12 could not be clustered into two distinct groups which were not functionally interdependent. In agreement with the opposition division's reasoning (see decision under appeal, point 59 of the Reasons), due to the manner in which the two different counting apparatuses were configured (i.e. the processing speeds and the respective acceptance thresholds) together with a central server, it was possible to further improve sheet inspection capacity and efficiency without reducing the overall processing speed and accuracy.

Even if there were two partial objective technical problems, the solution to the first partial objective technical problem relating to the relationship between a lower speed and a threshold having a wider acceptance range according to feature A1.8 was not rendered obvious by document D2 (see arguments for the main request).

Moreover, document E15 comprised a lot of manual input steps. Therefore, when faced with the second partial objective technical problem of designing the processing in such a way that the processing and the assignment of the results were simple and efficient, the person skilled in the art would not have taken into account document E15. The process in document E15 was not efficient at all. According to paragraph [0049] of document E15, rejected banknotes were stored in a tray, the order with the header cards was not to be disturbed and there was no flow of batch cards.

(ii) Opponent

The subject-matter of claims 1 and 4 of auxiliary request 40 did not involve an inventive step in view of document E12 combined with documents D2 and E15.

In addition to the features of the main request, except for feature A1.8, features A4.3a and A1.2a were also disclosed in document E12 (see document E12, page 15, last paragraph to the bottom of page 16). The inspection device ("Prüfeinrichtung 30") in document E12 had the function of a server (see document E12, page 9, lines 14 to 24, page 13, lines 5 to 7), and as such features A4.41 and A4.42 were disclosed in document E12 as well. Furthermore, feature A4.44 was disclosed in document E12, on page 9, lines 7 to 12 and on page 13, lines 1 to 7, in which data were stored in a control unit of the inspection device ("Prüfeinrichtung 30"). The subject-matter of claim 1 of auxiliary request 40 thus differed from document E12 on account of feature A1.8 and features A4.40, A1.40 and A4.43.

These features involved the classification and combination of the results of the sheet processing and the reinspection apparatus using batch cards. The processing of the results was independent of the speed and the sensors in the sheet processing and the reinspection unit. This was also obvious from the patent, in which paragraphs [0026] to [0103] were concerned with the processing of the data, and paragraphs [0104] to [0128] with the accuracy. Consequently, there were two partial objective technical problems. The first partial objective technical problem was the same as for the main request and the second partial objective technical problem was to design the processing in such a way that the processing and the assignment of the results were simple and efficient.

Regarding the obviousness of the solution to the first partial objective problem, the opponent referred to its submissions concerning the main request. Regarding the solution to the second partial objective technical problem, the person skilled in the art would have considered the teaching of document E15, in which a system for processing and reinspecting banknotes separated by batch cards was disclosed. Although, in document E15, the reinspection was not done automatically as in document E12, document E15 disclosed a database and was concerned with generating the data, and not with handling them. Apart from that, features A4.40 and A1.40 did not exclude manual input. Figure 6 of document E15 showed a standby station 51, a banknote sorter 1, a reject data manual input station 54, and a database server 53. The database function used the header card number as a key and stored data such as account number, slip sum, number of mechanically counted bankcards, number of manually

input banknotes, number of false banknotes, and comments. First, input banknotes were attributed to header cards in the standby station 51. Data were transmitted and stored in the database server 53. Afterwards, the banknote sorter 1 was operated and rejected banknotes were reprocessed. Finally, corresponding data were combined (see document E15, paragraphs [0036], [0041], [0042], [0044] to [0049] and [0051]). Since document E15 disclosed an analogue system corresponding to that of document E12, the person skilled in the art would have applied the approach in document E15 to the system in document E12 and would have arrived at the subject-matter of claim 1 and also at the subject-matter of the method claim.

(i) Auxiliary request 5 - clarity

(i) Patent proprietor

Claim 1 of auxiliary request 5 was clear. The term "items" in claim 1 of auxiliary request 5 referred to "inspection items", as could be derived from the wording of the claim: "*(...) the reinspection apparatus (200) is configured to inspect the sheets with fewer items when operating in the check processing mode than the normal processing mode*". Thickness, magnetic characteristics, etc., constituted examples of such inspection items. Moreover, said term was already found in claim 3 as granted, and thus its clarity could not be examined in view of decision G 3/14. Claim 3 as granted merely used different wording but referred to the same "items" as claim 1 of auxiliary request 5. Another context did not imply a different meaning of the term "item". Concerning the second determination threshold, claim 1 did not distinguish between the check processing mode and the normal processing mode

with regard to the second determination threshold. The added feature relating to the reinspection apparatus being configured to conduct a reinspection in two different modes was not tied to setting the second determination threshold of the respective inspection items.

(ii) Opponent

Claim 1 of auxiliary request 5 was not clear for several reasons. First, it was not clear what the term "item" meant. Although the term "items" had been used in claim 3 as granted, it was in a different context. While claim 3 as granted referred to the inspection unit (216), the term "items" was then mentioned in the context of the reinspection. As such, it might also be examined in view of decision G 3/14. Second, the relationship between "items" and the "second determination threshold" was not clear since, according to page 25, line 23 to page 26, line 7 of the patent, there was a separate threshold for each item. Third, another unclear point was whether the second determination threshold had a wider acceptance range in both processing modes.

(j) Auxiliary request 5 - novelty and inventive step of the subject-matter of claim 1 - sufficient substantiation

(i) Patent proprietor

The objections of lack of novelty and lack of inventive step were not substantiated (see opponent's reply, letter dated 6 September 2019, section VII.2 on page 23). A mere reference to a paragraph in document D2 could not constitute a substantiated novelty attack. In

particular, the mode described in said paragraph did not anticipate a reinspection apparatus that was configured to inspect the sheets with fewer items when operating in the check processing mode than the normal processing mode. On the contrary, the banknotes were not inspected at all in the mode described in said paragraph (see document D2, paragraph [0089]).

Likewise, pointing to document E5 without even indicating any text passage did not substantiate a novelty or inventive-step objection.

Therefore, the supplementary submissions to its novelty and/or inventive-step objections put forward during the oral proceedings constituted new submissions which were not to be admitted under Article 13(2) RPBA 2020. The fact that an objection was simple did not justify its late submission. Under Article 114 EPC it was at the board's discretion to admit the objection; however, under Article 13(2) RPBA 2020, there were no exceptional circumstances.

(ii) Opponent

The subject-matter of claim 1 of auxiliary request 5 was not novel and not inventive. The arguments had already been presented in the notice of opposition. In addition, since the sheet processing apparatus was not part of claim 1 of auxiliary request 5, the claim had to be interpreted in a broad way. Therefore, it was sufficient that any speed and any threshold was anticipated. Document D2 disclosed two modes, namely one inspection mode and one counting mode without inspection. Therefore, the subject-matter of claim 1 of auxiliary request 5 was not inventive starting from document E12 in combination with document D2. This

objection was so simple and obvious that it was to be admitted under Article 13(2) RPBA 2020.

(k) Auxiliary request 5 - sufficiency of disclosure

(i) Patent proprietor

The question of whether sufficiency of disclosure as required by Article 83 EPC was also to be assessed in respect of auxiliary request 5. The patent proprietor had a particular interest in a decision by the board on sufficiency of disclosure. The gist of the invention was a combined effect of the second speed being lower than the first speed and the second determination threshold having a wider acceptance range than the first determination threshold, as explained during the discussion of inventive step of the subject-matter of claims 1 and 4 for the main request (see point XIV(a)(i) above). This definition was clear to the person skilled in the art. The invention as defined in auxiliary request 5 therefore complied with the requirements of Article 83 EPC.

The understanding of the second determination threshold having a wider acceptance range than the first determination threshold explained in point XIV(a)(i) above did not contradict the description, especially paragraphs [0110] to [0118], and the drawings, especially Figures 7 to 9, of the patent, as alleged by the opponent.

Paragraph [0110] of the patent correctly taught that the values were detected with less variation for a lower speed and that was why the acceptance range could be set to be wider for the reinspection unit. This was in line with the examples in Figures 7 to 9, in which

the difference between the fit sheet signals and the counterfeit signals was greater for lower speeds (see patent, paragraphs [0112] to [0116]). The summary of these findings in paragraph [0117] contained two errors. The person skilled in the art would immediately and without doubt realise that it should read "fit sheet signal B < fit sheet signal C" instead of "fit sheet signal B > fit sheet signal C" (see patent, paragraph [0117], column 14, lines 56 to 57) and "determination margin C < determination margin B" instead of "determination margin C > determination margin B" (see patent, paragraph [0117], column 15, lines 3 to 4). Figures 7 to 9 were correct since they were merely schematic drawings and could not be compared with each other. As such, the drawings did not contradict paragraphs [0110] to [0116] of the patent.

On the basis of this understanding, the invention was disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

(ii) Opponent

The ground for opposition under Article 100(b) EPC raised and discussed in opposition proceedings for the main request equally applied to the auxiliary requests. The patent did not disclose the invention in a manner sufficiently clear and complete for it to be carried out by the person skilled in the art.

In agreement with the patent proprietor's explanation, a threshold generally defined an upper or a lower limit. For an upper limit, the fit values had to be below the threshold, and for a lower limit, the fit values had to be above the threshold. This was clear

and generally known to the person skilled in the art; however, it was not clear to the person skilled in the art what was meant by "a threshold having an acceptance range" in claim 1 of auxiliary request 5, and there was no generally accepted definition of this concept. Consequently, the person skilled in the art would have consulted the patent specification, i.e. the description and the drawings. There was no definition of the term "threshold having an acceptance range" in the patent; however, an example was given in Figures 7 to 9 and the corresponding paragraphs [0110] to [0117] of the patent. Proceeding from the teaching in these paragraphs, the person skilled in the art would not have arrived at a definition as presented by the patent proprietor, but at a definition as elaborated upon in the board's communication under Article 15(1) RPBA 2020 under point 10.3. The patent proprietor's definition of an acceptance range contradicted the description. In the example in Figure 7 (signal A), the sheet remained stationary (see patent, paragraph [0112]). Figure 8 showed the detection result of the sheet by the sheet processing apparatus (signal B) (see patent, paragraph [0113]) and Figure 9 showed the detection result of the sheet by the sheet reinspection apparatus (signal C) (see patent, paragraph [0115]). According to claim 1 of auxiliary request 5, the determination threshold C shown in Figure 9 had to have a wider acceptance range than the determination threshold B in Figure 8. If the patent proprietor's definition of an acceptance range (i.e. from the determination threshold to infinity) were correct, this contradicted the description and the drawings of the patent. Using the patent proprietor's definition of an acceptance range, the acceptance range was larger for Figure 8 than for Figure 9 since the determination threshold was lower in Figure 8. Although Figures 7 to 9 of the patent were qualitative

illustrations, this qualitative teaching of the figures was in line with the description of these figures. Paragraph [0117] of the patent explicitly disclosed "determination margin C > determination margin B". Due to the lack of disclosure regarding the meaning of "a threshold having an acceptance range" in the context of the patent in suit, the person skilled in the art did not know how to choose "*a second determination threshold having a wider acceptance range than the first determination threshold*". Moreover, there was no example clearly elucidating the subject-matter of claim 1 of auxiliary request 5 and in particular the meaning of "a threshold having an acceptance range". Therefore, the invention was not disclosed in a manner sufficiently clear and complete for it to be carried out by the person skilled in the art.

Reasons for the Decision

1. Decision in written proceedings

At the oral proceedings before the board, all relevant issues were discussed and the debate was closed. At the conclusion of the oral proceedings, the board was not yet in a position to judge whether the case was ready for decision, and furthermore it did not consider any further discussion possible in view of the late hour of the oral proceedings. Therefore, the chairman did not announce the decision on the appeal orally in accordance with Article 15(6) RPBA 2020, but informed the parties that the decision would be made in written proceedings.

After careful consideration of all the parties' written

and oral submissions, the board sees no reason to re-open the debate on the issues discussed at the oral proceedings before the board and to send further communications or to appoint second oral proceedings. Since the board now considers the case to be ready for decision, the present decision will be taken in written proceedings in accordance with Article 12(8) RPBA 2020, with due regard to the parties' procedural rights under Articles 113 and 116 EPC. In particular, the principle of the right to be heard under Article 113(1) EPC is fully respected, since the parties have presented arguments on the merits and the board has based its decision on those arguments. The case is ready for decision on the basis of the contested decision to be reviewed and the parties' written and oral submissions.

2. Main request - inventive step

2.1 Document E12 discloses an arrangement of two distinct apparatuses with inspection units having different speeds and different sensors (see document E12, page 12, lines 5 to 14). It is not disputed by the parties that document E12 is a suitable starting point for the assessment of inventive step.

2.2 The subject-matter of claim 1 of the main request differs from the disclosure in document E12 on account of feature A1.8, i.e. the second determination threshold having a wider acceptance range than the first determination threshold. This is not disputed.

2.3 The opposition division considered feature A1.3 to constitute a further distinguishing feature (see decision under appeal, point 11 of the Reasons); however, as the opponent stated, this feature is disclosed in document E12. Claim 15 of document E12

discloses that sheets are transported at a higher speed than in the further device: "*das Blattgut in der Vorrichtung (1) mit einer höheren Geschwindigkeit transportiert wird als in der weiteren Vorrichtung (100), oder umgekehrt.*" This disclosure in document E12 anticipates the feature A1.3 that the second speed is lower than the first speed.

2.4 According to the patent, the distinguishing feature A1.8 has the technical effect of enabling more efficient sheet inspection (see patent, paragraph [0118]). The higher accuracy is related to the second speed being lower than the first speed according to feature A1.3 (see patent, paragraphs [0020] and [0021]). Feature A1.8, the threshold in the reinspection apparatus having a wider acceptance range, is related to efficiency. Paragraph [0023] discloses: "*Furthermore, the reinspection apparatus 200 may be configured to make various determinations using a threshold different from a threshold in the normal mode when operating in the check processing mode. Thus, the reinspection apparatus 200 can use such a threshold that the sheets are more easily determined to be recirculatable fit sheets. As a result, the reinspection apparatus 200 can prevent the increase of the number of sheet reinspections.*"

Therefore, as argued by the opponent, the objective technical problem to be solved is to provide a sheet inspection system which reduces the number of rejected fit sheets.

The board cannot follow the patent proprietor's view that the objective technical problem is related to both efficiency and accuracy. The advantages set out in paragraph [0130] of the patent, i.e. "more easily

determined as fit sheets" and "enable more efficient sheet inspection with higher security", are not only related to the threshold of the reinspection apparatus having a wider acceptance range, but also to the second speed being lower than the first speed. While the threshold of the reinspection apparatus having a wider acceptance range raises efficiency, the second speed being lower than the first speed raises accuracy. The latter is known from document E12.

2.5 In the board's view, the solution to the objective technical problem of providing a sheet inspection system which reduces the number of rejected fit sheets is rendered obvious by document D2.

Document D2 is concerned with the inspection and reinspection of sheets and with simplifying this (see document D2, paragraph [0010]). Therefore, when seeking a solution to the above-mentioned problem, the person skilled in the art would have considered the teaching of document D2. In contrast to document E12, the inspection and reinspection in document D2 is carried out in one apparatus. In the board's view, this would not have been an obstacle for the person skilled in the art to combine these documents since it is irrelevant to the solution to the above-mentioned objective technical problem whether the inspection and reinspection is carried out with the same apparatus or two distinct apparatuses.

Document D2 discloses the same principle as the claimed solution, i.e. a wider acceptance range (see document D2, paragraph [0089]). Document D2 explicitly discloses that "*[w]ith the provision of each second judgment threshold value set smaller than each corresponding first judgment threshold value, the level of the*

authenticity judgment or denomination judgment for the banknotes P is lowered to some extent. Namely, the relaxation counting mode of this embodiment is intended for providing some possibility of being judged to be true to even such a banknote P that is not judged to be true in the normal counting mode." (see document D2, paragraph [0089], emphasis added).

This means that the second judgment threshold value is set such that the acceptance range is wider (see feature A1.8 of claim 1 of the main request). Therefore, the principle of feature A1.8 is disclosed in document D2 and the person skilled in the art would have applied this principle to the inspection units disclosed in document E12.

The patent proprietor argued that document D2 discloses two counting modes and that, consequently, the person skilled in the art had to make a choice implying inventive activity. This cannot be followed by the board for the following reason. Document D2 discloses a mere counting mode and a relaxation mode. In the board's view, starting from document E12 and looking for a solution to the above-mentioned objective technical problem, the person skilled in the art would not have considered the mere counting mode without any inspection, but would inevitably have turned to the relaxation mode.

The patent proprietor also pointed to the fact that document D2 does not disclose a lower speed for the reinspection; however, claim 15 of document E12 already discloses that a lower speed is used for reinspection, and therefore this aspect cannot justify the presence of an inventive step. Starting from this embodiment of document E12, the person skilled in the art would have

been taught by document D2 that the number of rejected fit sheets can be reduced by a second determination threshold having a wider acceptance range than the first determination threshold.

2.6 Conclusion on inventive step of the subject-matter of claim 1 of the main request

The subject-matter of claim 1 of the main request does not involve an inventive step (Article 56 EPC) in view of document E12 in combination with document D2.

3. Auxiliary request 1a

3.1 Auxiliary request 1a - admittance

3.1.1 Auxiliary request 1a was filed for the first time during the oral proceedings before the board. At that time, its admittance was subject to Article 13(2) RPBA 2020, which applied in the current case in accordance with the transitional provisions of Article 25(1) and (3) RPBA 2020, since the summons to oral proceedings had been notified after the date on which RPBA 2020 entered into force, i.e. 1 January 2020 (Article 24(1) RPBA 2020). At the oral proceedings, the board exercised its discretion under Article 13(2) RPBA 2020 and decided to admit auxiliary request 1a into the appeal proceedings.

The board notes that after the oral proceedings before the board, Article 13(2) RPBA 2020 was amended. Amended Article 13(2) RPBA entered into force as of 1 January 2024 and applies to all appeal proceedings pending on or after 1 January 2024 (see OJ EPO 2023, A103), and therefore also to the current case; however, since the board has already decided on the question of

the admittance of auxiliary request 1a into the appeal proceedings at the oral proceedings by exercising its discretion under Article 13(2) RPBA 2020, which was applicable at that time, the subsequent amendment to this provision is not relevant to this question. Furthermore, the board notes that the amendment to Article 13(2) RPBA 2020 does not affect the question of the admittance of auxiliary request 1a in the current case, since the only change is the replacement of the wording "*summons to oral proceedings*" with the wording "*communication under Article 15, paragraph 1,*". This amended condition in Article 13(2) RPBA (in force as of 1 January 2024) whereby it applies to any amendment to a party's appeal case made after notification of a communication under Article 15(1) RPBA 2020 would also be fulfilled in the current case. It also follows from the aforementioned amendment to Article 13(2) RPBA that the Explanatory remarks on Article 13(2) RPBA 2020 and the case law of the Boards of Appeal on the requirements and concepts of Article 13(2) RPBA 2020 continue to apply.

3.1.2 Auxiliary request 1a is based on auxiliary request 1, which was withdrawn at the oral proceedings before the board. Auxiliary request 1a includes only the method claim of auxiliary request 1, as apparatus claims 1 to 4 of auxiliary request 1 have been deleted.

3.1.3 The patent proprietor argued that deleting claims 1 to 4 from auxiliary request 1a compared with the claims of auxiliary request 1 was not an amendment within the meaning of Article 13(2) RPBA 2020 and that auxiliary request 1a should therefore be admitted into the appeal proceedings. In support of its view, the patent proprietor referred to the Case Law of the Boards of Appeal of the European Patent Office, 10th edition,

July 2022, "Case Law", V.A.4.2.2 d).

3.1.4 It is true that some board of appeal decisions take the view that, in certain circumstances of the case, deleting claims which were already the subject of appeal proceedings does not constitute an amendment to the appeal case, and therefore the board has no discretion regarding the admittance of such amendments under Article 13(2) RPBA 2020 (see Case Law, V.A.4.2.2 d)). According to this approach, deleting claims does not amend the appeal case if it does not alter the factual situation (see e.g. T 995/18, point 2 of the Reasons; T 981/17, point 3 of the Reasons; T 2243/18, point 2 of the Reasons; T 1792/19, point 2 of the Reasons; T 1857/19, point 1.1 of the Reasons) or if it does not require the matters at issue to be (thoroughly) re-evaluated (see e.g. decisions T 995/18, T 981/17).

3.1.5 The board does not share this view for the reasons set out in decision T 2091/18, point 4 of the Reasons, but follows the view expressed in decision T 2091/18 that the question of whether an appeal case has been amended within the meaning of Article 13(2) RPBA 2020 must be detached from considerations of the impact on the progress of the appeal proceedings; however, such considerations can certainly play a role in the question of whether there are exceptional circumstances within the meaning of Article 13(2) RPBA 2020. Consequently, the board considers deleting an (independent or dependent) claim to be an amendment (see also e.g. decisions T 1569/17, point 4.3.1 of the Reasons and T 2091/18, point 4.1 of the Reasons; and Case Law, V.A.4.2.2 d)).

3.1.6 Therefore, in principle, auxiliary request 1a constituting an amendment to the patent proprietor's case is not be taken into account unless there are exceptional circumstances, which have been justified with cogent reasons by the party concerned (see Article 13(2) RPBA 2020). Since auxiliary request 1a is limited to a sole method claim that is identical to the method claim of the previous auxiliary request 1 and since all the apparatus claims have been deleted, no new issues arise at this late stage of the proceedings. By deleting the apparatus claims, the objection under Article 84 EPC and some of the objections under Article 123(2) EPC, which have been raised only for the apparatus claims, are resolved. This simplifies the case. Therefore, the board considers the filing of auxiliary request 1a to constitute exceptional circumstances within the meaning of Article 13(2) RPBA 2020.

3.1.7 Conclusion on the admittance of auxiliary request 1a

The board exercised its discretion under Article 13(2) RPBA 2020 and decided to admit auxiliary request 1a into the appeal proceedings.

3.2 Auxiliary request 1a - added subject-matter

3.2.1 The objections under Article 123(2) EPC raised by the opponent against claim 1 of auxiliary request 1a concern the features regarding sending the result of the counting to the server without further data being sent such as the batch card ID, the classification of the sheets, and the determination result.

3.2.2 The board notes that the application as filed underlying the patent in suit discloses that data are

sent to the server; however, according to several passages in the application as filed, these data, i.e. the associated inspection/reinspection result, include the batch card ID, the classification of the sheets, the number of the sheets, and the determination result. Page 5, lines 1 to 4 of the application as filed discloses that "*[t]he sheet processing apparatus 100 sends the associated inspection result (including batch card ID, the classification of the sheets, the number of the sheets, and the determination result) to the server (300)*". Page 8, lines 8 to 12 of the application as filed discloses that "*[t]he reinspection apparatus 200 sends the associated reinspection result (including the batch card ID, the classification of the sheets, the number of the sheets, and the determination result) to the server 300.*" Consequently, sending only "the result of the counting" constitutes an unallowable intermediate generalisation.

3.2.3 The patent proprietor referred to claims 1 and 6 of the application as filed, in which only the result of the counting is output. The board notes that claims 1 and 6 of the application as filed do not include a server or sending data to the server. Therefore, these claims do not directly and unambiguously disclose that only the result of the counting is sent to the server.

Furthermore, by referring to page 35, lines 12 to 14 of the application as filed, the patent proprietor argued that the counting result was equated with the reinspection result. According to the patent proprietor this passage directly and unambiguously disclosed that the counting result was sent to the server. Page 35, lines 10 to 23 of the application as filed reads as follows:

"*As a result of one of the three kinds of processing modes described above, all the rejected sheets are counted and invalidated. In this case, the reinspection apparatus 200 sends the counting result, that is, the reinspection result to the server 300.*

The server 300 combines the reinspection result sent from the reinspection apparatus 200 with the inspection result sent from the sheet processing apparatus 100, and stores the combined inspection result in the storage medium in the server 300. For example, the server 300 adds the reinspection result to the inspection result which includes identification information corresponding to the identification information included in the reinspection result."

In the board's view, this passage discloses that the reinspection result is sent to the server. The reinspection result includes, but is not limited to, the counting result. Therefore, page 35 of the application as filed does not directly and unambiguously disclose that only the result of the counting is sent to the server.

3.3 Conclusion on added subject-matter in claim 1 of auxiliary request 1a

Claim 1 of auxiliary request 1a does not meet requirements of Article 123(2) EPC.

4. Auxiliary request 2a

4.1 Auxiliary request 2a - admittance

4.1.1 Auxiliary request 2a was filed during the oral proceedings before the board. At the oral proceedings,

the board exercised its discretion under Article 13(2) RPBA 2020 and decided to admit auxiliary request 2a into the appeal proceedings. The admittance of auxiliary request 2a into the appeal proceedings was therefore subject to Article 13(2) RPBA 2020 in the current case (see point 3.1.1 above).

4.1.2 Similarly to auxiliary request 1a, auxiliary request 2a includes only the method claim of auxiliary request 2, which was withdrawn at the oral proceedings before the board. Apparatus claims 1 to 4 of auxiliary request 2 have been deleted. As a consequence, the same considerations apply as for the admittance of auxiliary request 1a (see point 3.1 above).

4.1.3 Conclusion on the admittance of auxiliary request 2a

The board exercised its discretion under Article 13(2) RPBA 2020 and decided to admit auxiliary request 2a into the appeal proceedings.

4.2 Auxiliary request 2a - added subject-matter

4.2.1 The objections under Article 123(2) EPC raised by the opponent against claim 1 of auxiliary request 2a concern the features regarding sending the result of the counting to the server together with identification information obtained from a batch card included with the sheets, but without further data being sent, such as the classification of the sheets and the determination result.

4.2.2 The patent proprietor referred to claims 1 and 6 of the application as filed on which the patent is based. The board refers to its observations for auxiliary request 1a (see point 3.2.3). The passages on page 4, line 24

to page 5, line 4 and on page 8, lines 4 to 21 of the application as filed, which were cited by the patent proprietor, all disclose sending the inspection result in which the counting result of the sheets, the classification of the sheets, the batch card ID and the determination result are associated. Page 4, line 24 to page 5, line 4 of the application as filed discloses that "*[t]he sheet processing apparatus 100 associates the counting result of the sheets, the classification of the sheets, the identification information on the batch card, and the determination result with each bundle of the sheets. The sheet processing apparatus 100 sends the associated inspection result (including the batch card ID, the classification of the sheets, the number of the sheets, and the determination result) to the server 300.*" It is not directly and unambiguously disclosed that these data are only examples of the data that the associated inspection result may comprise. Therefore, there is no basis in the application as filed for sending to the server only the result of the counting and the identification information obtained from a batch card included with the sheets.

On page 26, lines 8 to 16 and page 35 of the application as filed, which were also referred to by the patent proprietor, no batch card is mentioned. Consequently, these passages are not pertinent.

4.2.3 Conclusion on added subject-matter in claim 1 of auxiliary request 2a

Claim 1 of auxiliary request 2a does not meet the requirements of Article 123(2) EPC.

5. Auxiliary requests 3 and 4 - added subject-matter

According to claim 1 of auxiliary request 3, the server combines the result of the counting output by the first output unit of the sheet processing apparatus with the result of the counting output by the output unit of the reinspection apparatus. In the system in claim 1 of auxiliary request 4, the server combines these results of the counting using the identification information.

With reference to page 4, line 24 to page 5, line 4 of the application as filed for the sheet processing unit and page 8, lines 8 to 21 of the application as filed for the reinspection apparatus, the board notes that, in the application as filed, not only is the counting information combined using the identification information, but data such as batch card ID, the classification of the sheets and the determination result are also processed. The board thus arrives at the same conclusion as for claim 1 of auxiliary requests 1a and 2a.

5.1.1 Conclusion on added subject-matter in claim 1 of auxiliary requests 3 and 4

Claim 1 of auxiliary requests 3 and 4 does not meet the requirements of Article 123(2) EPC.

6. Auxiliary request 40

Auxiliary request 40 was considered by the opposition division to meet the requirements of the EPC. The opponent raised an objection of lack of inventive step against the subject-matter of claim 1 of this request in view of document E12 combined with document D2 for the first partial objective technical problem and

combined with document E15 for the second partial objective technical problem.

6.1 Auxiliary request 40 - admittance of the objection of lack of inventive step in view of document E12 combined with document D2 for the first partial objective technical problem

6.1.1 In its reply, the opponent raised an objection of lack of inventive step in view of document E12 combined with document D2 for the main request (see opponent's reply, point I.7). Under point VI. of its reply, the opponent discussed auxiliary request 40 and referred to the arguments put forward for the main request ("*Entsprechend den obigen Ausführungen zu dem Hauptantrag und den Hilfsanträgen, wird zusätzlich zu den Argumentationen in der Beschwerdebegründung der Einsprechenden ausgeführt, dass zu den Merkmalen in Bezug auf die Verwendung des zweiten Schwellwerts mit dem größeren Akzeptanzbereich auch die Argumentation zum Hauptantrag unter I. dieses Schriftsatzes entsprechend gilt.*").

The patent proprietor argued that the opponent should already have raised this objection in its statement of grounds of appeal in view of Article 12(4) and (2) RPBA 2007 and that the opponent therefore could not supplement its appeal case in its reply to the patent proprietor's statement of grounds of appeal.

6.1.2 In the current case, the statement of grounds of appeal was filed before the date on which the RPBA 2020 entered into force, i.e. 1 January 2020, and the reply to it was filed in due time. Therefore, in accordance with Article 25(2) RPBA 2020, Article 12(4) to (6) RPBA 2020 does not apply. Instead, Article 12(4) RPBA 2007

continues to apply. Article 12(4) RPBA 2007 stipulates, *inter alia*, that the statement of grounds of appeal (Article 12(1)(a) RPBA 2007) or the reply (Article 12(1)(b) RPBA 2007) has to be taken into account by the board if it meets the requirements of Article 12(2) RPBA 2007. Under Article 12(2) RPBA 2007, the statement of grounds of appeal and the reply to it must contain a party's complete case and should, *inter alia*, specify expressly all the facts, arguments and evidence relied on.

6.1.3 The board considers that the opponent's statement of grounds of appeal together with its reply to the patent proprietor's statement of grounds of appeal contains the opponent's complete case as required in Article 12(2) RPBA 2007. Article 12(2) RPBA 2007 does not distinguish between submissions made by a party in its own statement of grounds of appeal and those put forward in its reply to the other party's statement of grounds of appeal. The board therefore has no discretion to disregard this objection of lack of inventive step.

6.1.4 Conclusion on admittance of the objection of lack of inventive step in view of document E12 combined with document D2 for the first partial objective technical problem

The opponent's objection of lack of inventive step with respect to the subject-matter of claim 1 of auxiliary request 40, which was based on a combination of document E12 with document D2 for the first partial objective technical problem, is taken into account under Article 12(4) and (2) RPBA 2007.

6.2 Inventive step

6.2.1 The opponent argued that the subject-matter of claim 1 of auxiliary request 40 did not involve an inventive step in view of document E12 combined with documents D2 and E15.

6.2.2 Document E12 discloses all the features of claim 1 of the main request except for feature A1.8 (see point 2.2). Of the features added to claim 1 of auxiliary request 40 compared with claim 1 of the main request, document E12 also discloses features A4.3a, A1.2a, A4.41, A4.42 and A4.44. In document E12, the sheets can be in the form of separate bundles which are separated by batch cards ("Trennkarten"), which might comprise information such as an account number ("Kontonummer") or information about the bundle (see document E12, page 15, line 22 to page 16, line 6). The board agrees with the opponent that the control unit of the inspection device ("Prüfeinrichtung 30") in document E12 also has the function of a server. Data can be stored in a control unit that is integral with this inspection device ("Prüfeinrichtung 30") or in a separate unit (see document E12, page 9, lines 17 to 19). Therefore, the patent proprietor's argument that, in document E12, the inspection device ("Prüfeinrichtung 30") did not have the function of a separate server is not convincing. In document E12, data are transferred to the inspection device ("Prüfeinrichtung 30") to add, change and compare the data stored in it (see document E12, page 13, lines 1 to 7 and page 9, lines 1 to 9).

Consequently, the subject-matter of claim 1 of auxiliary request 40 differs from the disclosure of document E12 on account of features A1.8, A4.40, A1.40

and A4.43.

6.2.3 In accordance with the opponent, the board does not see any synergistic effect between feature A1.8 on the one hand and features A4.40, A1.40 and A4.43 on the other hand, which are concerned with processing information, namely the results of the sheet inspection. The fact that the second determination threshold has a wider acceptance range is not related to the centralisation of the computation in the server and the combination of the counting results from the two different apparatuses. In addition, this becomes obvious from the patent itself, in which paragraphs [0026] to [0103] are concerned with processing the resulting data and paragraphs [0104] to [0128] with the accuracy of the inspection.

6.2.4 For the first partial objective technical problem with respect to feature A1.8 and the obviousness of its solution in view of document D2, reference is made to the discussion of inventive step of the subject-matter of claim 1 of the main request (see point 2.). For the reasons already established in the context of the main request, the solution to the first partial objective technical problem does not involve an inventive step.

6.2.5 The technical effect of features A4.40, A1.40 and A4.43 is simple and efficient processing of the results obtained from the sheet processing apparatus and the reinspection apparatus. Therefore, the board agrees with the opponent's formulation of the second partial objective technical problem, which is to design the processing in such a way that the processing and the assignment of the results are simple and efficient (see also patent, paragraphs [0005] and [0129]).

6.2.6 Document E15, which is a document from the same field as document E12, is concerned with processing and reinspecting sheets such as banknotes (see document E15, Figure 6; paragraphs [0046] to [0049]) and processing the results and information obtained from this (see document E15, paragraphs [0036] to [0044]). Therefore, when seeking a solution to the second partial objective technical problem, the person skilled in the art would have consulted document E15.

The board does not concur with the patent proprietor's argument that the person skilled in the art would not have considered the teaching of document E15 since the solution according to document E15 involved a lot of steps which were carried out manually. When looking for a solution to the processing and the assignment of the results, it is more important which conceptual approach is suggested than how this is then implemented in a specific context. In document E15, the suggestion is to use batch cards containing the necessary information.

Document E15 discloses the claimed solution to the second partial objective technical problem including all the distinguishing features: according to Figure 6 and paragraph [0037] of document E15, the standby station 51 reads the header card number, inputs the account number, slip sum, etc., and transmits the data to the database server 53. Then, the banknote sorter 1 executes counting of the banknotes, sorting of the banknote kind, adjusting of the direction, bundling, reading of the header card, and transmits data to the database server (see document E15, paragraph [0038]). Paragraph [0049] of document E15 discloses the reinspection process and the counting data obtained from this, and that the header card number is transmitted to and registered in the database server.

The combination of the results is performed by the database server (see document E15, paragraph [0051]).

To conclude, the solution to the second partial objective technical problem is rendered obvious starting from document E12 in combination with document E15.

6.2.7 Conclusion on inventive step of the subject-matter of claim 1 of auxiliary request 40

Since the solutions to the first and the second partial objective technical problems, respectively, are both obvious in view of the prior art, the subject-matter of claim 1 of auxiliary request 40 does not involve an inventive step (Article 56 EPC).

7. Auxiliary request 5

7.1 Auxiliary request 5 - clarity

7.1.1 With respect to claim 1 of auxiliary request 5 the opponent raised objections of lack of clarity concerning the term "item", the relationship between "items" and the "second determination threshold", and "*whether the second determination threshold has a wider acceptance range in both processing modes*".

7.1.2 In accordance with decision G 3/14, a patent as amended may be examined for compliance with the requirements of Article 84 EPC only when, and then only to the extent that, the amendments introduce non-compliance with Article 84 EPC. The board observes that the term "item" was already used in claim 3 of the patent as granted, which states that "*the inspection unit (216) retrieves detection values of more items from the sheets than the*

sheet processing apparatus."

By the same token, the alleged lack of clarity concerning the relationship between "items" and the "second determination threshold" in claim 1 of auxiliary request 5 does not arise from post-grant amendments. The board shares the patent proprietor's view that the context of the term "items" in claim 3 of the patent as granted and in the features of claim 1 of auxiliary request 5 is the same, even if the claims use different wording for defining the same subject-matter. There is no technical difference between whether detection values of "items" are retrieved and whether the sheets are inspected with "items". The relationship between the term "item" and "second determination threshold" was already found in feature A1.8 of claim 1 of the patent as granted and its dependent claim 3.

Therefore, in view of decision G 3/14, claim 1 of auxiliary request 5 is not to be examined for compliance with the requirements of Article 84 EPC in view of a potential lack of clarity of the term "item" and the relationship between "item" and "second determination threshold".

7.1.3 It is a different matter for the clarity objection raised against the claim wording "*whether the second determination threshold has a wider acceptance range in both processing modes*". The feature concerning the two processing modes was added from the description (see application as filed, page 32, line 6 to page 33, line 4). Therefore, this objection is occasioned by the post-grant amendment to claim 1 and, in accordance with decision G 3/14, can be examined for the requirements of Article 84 EPC. The board shares the patent proprietor's view that the two different processing

modes are not tied to feature A1.8 of claim 1 of auxiliary request 5, whereby the second determination threshold has a wider acceptance range. Consequently, the addition of the feature concerning the two processing modes does not lead to a lack of clarity of claim 1 of auxiliary request 5.

7.1.4 Conclusion on clarity of claim 1 of auxiliary request 5

Insofar as the opponent's clarity objections are open to examination in view of decision G 3/14, the amendments to claim 1 of auxiliary request 5 comply with Article 84 EPC.

7.2 Auxiliary request 5 - non-admittance of objections of lack of novelty and lack of inventive step under Article 12(4) and (2) RPBA 2007

7.2.1 With its reply, the opponent submitted, in general terms, objections of lack of novelty and lack of inventive step against the subject-matter of claim 1 of auxiliary request 5 (see opponent's reply, page 23, section VII.2). The opponent only argued, as reproduced below, that document D2 disclosed a sheet processing apparatus with an operating mode in which certain criteria were omitted by referring to paragraph [0089], in particular column 25, lines 29 to 31 of document D2. It added that the omission of test criteria was also found in document E5:

"*VII.2 Neuheit und erfinderische Tätigkeit.*

D2 offenbart bereits eine Blattbearbeitungsvorrichtung mit einem Betriebsmodus, in dem gewisse Prüfkriterien ausgelassen werden (vgl. Absatz [0089], insbesondere Spalte 25, Zeilen 29 bis 31 der D2). Der Gegenstand des

Anspruchs 1 ist daher nicht neu und beruht auch nicht auf erfinderischer Tätigkeit.

Das Weglassen von Prüfkriterien findet sich auch in E5."

7.2.2 The patent proprietor contests the admittance of these objections in view of Article 12(4) and (2) RPBA 2007 on the basis of the argument that they have not been properly substantiated in the appeal proceedings.

7.2.3 As explained in point 6.1.2 above, Article 12(4) and (2) RPBA 2007 applies to the opponent's objections put forward in its reply. Article 12(2) RPBA 2007 codifies that the statement of grounds of appeal and the reply must contain a party's complete case. They should set out clearly and concisely the reasons why it is requested that the decision under appeal be reversed, amended or upheld, and should specify expressly all the facts, arguments and evidence relied on. It is therefore established case law that insufficiently substantiated submissions are, as a rule, not considered in appeal proceedings (see Case Law, V.A. 5.11.1).

7.2.4 In its reply, the opponent did not state why document D2 was considered to destroy the novelty of the subject-matter of claim 1 of auxiliary request 5. This document was not used for an objection of lack of novelty against any of the patent proprietor's higher-ranking requests, either. For the main request, there was an objection of lack of inventive step based on document E12 in combination with document D2; however, it is not apparent for what reasons the subject-matter of claim 1 of auxiliary request 5 lacks an inventive step over document D2 and/or document E5. The opponent

did not specify any passages of document D2, either. The general reference to paragraph [0089] and especially column 26, lines 29 to 31 of document D2 does not concern the features of claim 1 of auxiliary request 5, but relates to the disclosure of a normal counting mode and a relaxation counting mode; however, a reinspection in a normal processing mode and a reinspection in a check processing mode is not an issue in document D2. For document E5, the opponent generally refers to the omission of inspection items, without identifying any passage. There is no indication of the combination of documents on which the opponent based its inventive-step objection.

7.2.5 For these reasons, the board came to the conclusion that the opponent's submissions with respect to its objections of lack of novelty and lack of inventive step had not been sufficiently substantiated in its reply and that these submissions are therefore not taken into account under Article 12(4) and (2) RPBA 2007.

7.3 Auxiliary request 5 - non-admittance of opponent's supplementary submissions

7.3.1 The patent proprietor contests the admittance of the opponent's supplementary submissions made during the oral proceedings before the board under Article 13(2) RPBA 2020 on the basis of the argument that they were filed late and that there were no exceptional circumstances justifying their admittance.

7.3.2 At the oral proceedings, the board exercised its discretion under Article 13(2) RPBA 2020 and decided not to admit into the appeal proceedings the opponent's supplementary submissions to its objections of lack of

novelty and of lack of inventive step made at the oral proceedings on 19 December 2022. Therefore, for similar reasons to those set out above in point 3.1.1, Article 13(2) RPBA 2020 applies to the question of admittance of the opponent's supplementary submissions in the current case.

Article 13(2) RPBA 2020 imposes stringent limitations on appeal submissions which are made at an advanced stage of the proceedings, namely after notification of the summons to oral proceedings. Where an amendment is made to a party's appeal case at this advanced stage of the proceedings, Article 13(2) RPBA 2020 provides that it will, in principle, no longer be taken into account unless the party concerned has presented compelling reasons why the circumstances are exceptional. If such circumstances exist, the board may, in exercising its discretion, decide to admit an amendment made to the appeal case at this advanced stage of the proceedings (see document CA/3/19, section VI, Explanatory remarks on Article 13(2); see also Supplementary publication 2 to OJ EPO 2020).

7.3.3 As justification for the late submissions made during the oral proceedings before the board, the opponent asserted that the supplementary submissions were very simple.

7.3.4 Even if the board were to accept that the supplementary submissions were simple, the board is unable to see how an unsubstantiated allegation of lack of inventive step in the opponent's reply could have given rise to exceptional circumstances within the meaning of Article 13(2) RPBA 2020, for the following reasons:

Auxiliary request 5 filed during the opposition

proceedings on 15 August 2018 was re-filed by the patent proprietor with its statement of grounds of appeal. In its reply, the opponent raised objections under Article 84 EPC. Regarding novelty and inventive step, only a general reference to documents D2 and E5 was made. Even if the opponent considered its objection, which was presented in a comprehensible manner only during the oral proceedings before the board, to be "simple", it should and could have submitted it with its reply. Furthermore, a "simple" objection does not necessarily simplify the case; sometimes, even an objection that initially seems to be simple complicates the case. Therefore, the opponent's assertion that its objection was simple does not constitute exceptional circumstances in the case at hand.

7.3.5 Therefore, the board exercised its discretion under Article 13(2) RPBA 2020 and decided not to admit into the appeal proceedings the opponent's supplementary submissions made at the oral proceedings on 19 December 2022 to its objections of lack of novelty and lack of inventive step.

7.4 Auxiliary request 5 - sufficiency of disclosure

7.4.1 During the oral proceedings before the board, the patent proprietor stated that it had a particular interest in a decision by the board on the issue of sufficiency of disclosure of claim 1 of auxiliary request 5. The opponent explained that the objection of insufficiency of disclosure against the independent claims of the main request in view of feature A1.8 ("*the determination unit (251) comprises a memory (251a) configured to store a second determination threshold having a wider acceptance range than the*

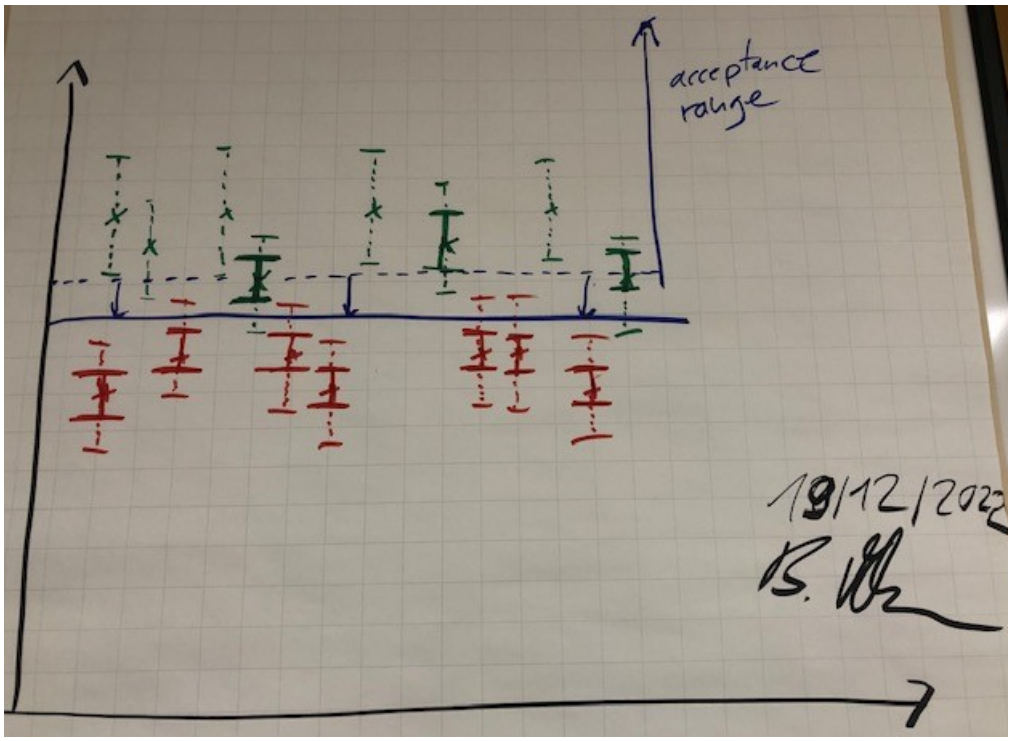
first determination threshold") had been raised in general and that it also applied to auxiliary request 5. In particular, the skilled person would not know how to implement "a threshold having a wider acceptance range".

7.4.2 According to the patent proprietor, the gist of the invention was a combined effect of the second speed being lower than the first speed and the second determination threshold having a wider acceptance range than the first determination threshold. The patent proprietor explained how the skilled person would implement a second determination threshold having a wider acceptance range than the first determination threshold using the graph reproduced above in point XIV(a)(i).

7.4.3 The board is of the view that the issue of sufficiency of disclosure hinges on the question of whether the person skilled in the art, based on the teaching of the patent specification as whole and common general knowledge, would be able to choose a second determination threshold having a wider acceptance range than the first determination threshold in accordance with feature A1.8 of claim 1 of auxiliary request 5. It is noted that the claim does not define the second threshold in comparison with the first threshold, but the second threshold with reference to an acceptance range. The board agrees with the opponent that there is no generally accepted definition of a "threshold having an acceptance range". Claim 1 of auxiliary request 5 does not contain any such definition, either. Therefore, when claim 1 of auxiliary request 5 is read in isolation, the skilled person would not be able to choose a second determination threshold having a wider

acceptance range than the first determination threshold in accordance with feature A1.8.

7.4.4 Moreover, the board shares the opponent's view that the other parts of the patent specification do not contain any definition of a "threshold having an acceptance range", either. According to the patent proprietor, in the context of the present case, the skilled person would understand the acceptance range to be the range extending from the determination threshold to infinity (see patent proprietor's drawing below). Consequently, the determination threshold had to be lowered if a wider acceptance range was to be achieved (see the dotted and bold horizontal lines on the graph).



7.4.5 However, as put forward by the opponent, the patent proprietor's view contradicts the only example given in Figures 7 to 9 (see below) and the corresponding paragraphs [0110] to [0117] of the patent in suit.

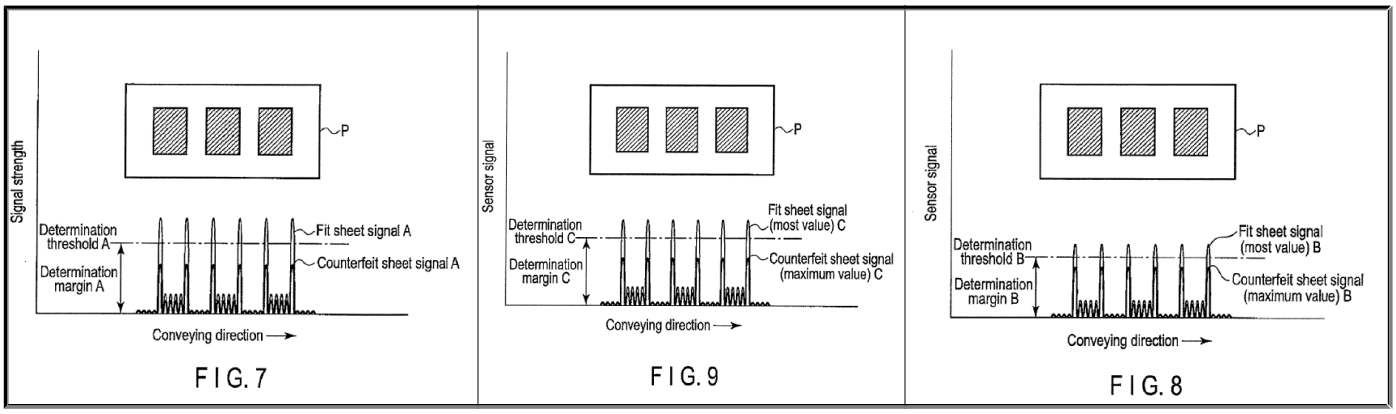


FIG. 7 FIG. 9 FIG. 8

Figure 7 relates to the situation in which the sheet is stationary and indicates a corresponding determination threshold A, fit sheet signal A and counterfeit sheet signal A (see patent, paragraph [0112]). Figure 8 shows the situation in which the sheet is processed at the higher speed in the sheet processing apparatus with a corresponding determination threshold B, fit sheet signal B and counterfeit sheet signal B (see patent, paragraph [0113]). Finally, Figure 9 shows the situation in which the sheet is processed at the lower speed in the sheet reinspection apparatus with a determination threshold C, fit sheet signal C and counterfeit sheet signal C (see patent, paragraph [0115]).

If the patent proprietor's definition of the acceptance range (i.e. from the determination threshold to infinity) were correct, feature A1.8 would require the determination threshold C shown in Figure 9 for the lower speed to be lower than the determination threshold B for the higher speed in Figure 8 in order to give a wider acceptance range. As correctly observed by the opponent, this is contrary to the teaching that the skilled person would derive from the drawings. Figures 7 to 9 of the patent are schematic figures indicating the qualitative differences in the determination thresholds, fit sheet signals and

counterfeit sheets for the different speeds (zero speed, higher speed in the sheet processing apparatus, lower speed in the reinspection apparatus). Even if these drawings are schematic, by comparing Figures 8 and 9 the skilled person would undoubtedly derive that the determination threshold C is higher than the determination threshold B. This teaching is explicitly confirmed by paragraph [0117] of the patent stating that "determination margin C > determination margin B".

In view of the consistent teaching of the drawings and the corresponding description, the board is not convinced that the skilled person would immediately realise that the passage in column 15, lines 3 to 4 in paragraph [0117] of the patent should read "determination margin C < determination margin B" instead of "determination margin C > determination margin B", as suggested by the patent proprietor. This finding is independent of the question of whether the skilled person would also realise that it should read "fit sheet signal B < fit sheet signal C" instead of "fit sheet signal B > fit sheet signal C" in column 14, lines 56 to 57 of paragraph [0117] of the patent. Therefore, the board shares the opponent's view that there is still a mismatch between the patent proprietor's understanding of how "*a second determination threshold having a wider acceptance range than the first determination threshold*" is to be realised and the teaching that the skilled person would take from the patent.

7.4.6 In summary, there is not a generally accepted definition of "a threshold having an acceptance range", and claim 1 of auxiliary request 5 does not contain any such definition, either. There is no definition of this terminology in any other part of the patent

specification either. Moreover, the patent proprietor's explanation of how the skilled person would implement "a threshold having a wider acceptance range" is not in line with the teaching provided by the example in the patent. Due to this lack of disclosure regarding the meaning of "a threshold having a wider acceptance range" in the context of the patent in suit, the person skilled in the art does not know how to choose "*a second determination threshold having a wider acceptance range than the first determination threshold*" as required by feature A1.8 of claim 1 of auxiliary request 5. It follows that neither claim 1, when considered in isolation, nor the additional teaching in the description and the drawings of the patent provide the skilled person with the necessary information to implement feature A1.8 of claim 1 of auxiliary request 5. Therefore, the claimed invention is not disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

For these reasons, claim 1 of auxiliary request 5 does not meet the requirements of Article 83 EPC.

8. Overall conclusion

Since none of the patent proprietor's requests is allowable, the patent has to be revoked.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar: The Chairman:

N. Schneider P. Lanz

Decision electronically authenticated