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Datasheet for the decision
of 8 February 2023

Case Number:	T 0975/20 - 3.5.07
Application Number:	11719575.0
Publication Number:	2603864
IPC:	G06F17/30
Language of the proceedings:	EN

Title of invention:
Visual localization method

Applicant:
NavVis GmbH

Headword:
Visual localization method/NAVVIS

Relevant legal provisions:
EPC Art. 84, 111(1), 113(1), 123(2)
EPC R. 106
RPBA 2020 Art. 11, 12(4), 13(2), 15(6)

Keyword:

Amendments - added subject-matter - main request and auxiliary
requests I to III (yes)
Claims - clarity - auxiliary request IV (no)
Amendment after summons - exceptional circumstances - auxiliary
request V (no)
Oral proceedings - substantial procedural violation (no) -
request for continuation of proceedings in writing (no)
Remittal to the department of first instance - (no)
Obligation to raise objections - objection dismissed

Decisions cited:

R 0009/10, T 0133/87, T 1376/07, T 2214/15

Case Number: **T 0975/20 - 3.5.07**

D E C I S I O N
of Technical Board of Appeal 3.5.07
of 8 February 2023

Appellant:	NavVis GmbH
(Applicant)	Blutenburgstraße 18
	80636 München (DE)
Representative:	Reitstötter Kinzebach
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	81679 München (DE)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 6 December 2019 refusing European patent application No. 11719575.0 pursuant to Article 97(2) EPC**

Composition of the Board:

Chair	J. Geschwind
Members:	M. Jaedicke
	P. San-Bento Furtado

Summary of Facts and Submissions

I.   The appellant (applicant) appealed against the
        examining division's decision refusing European patent
        application No. 11719575.0, which was filed as
        international application PCT/EP2011/057901 (published
        as WO 2012/019794 A1).

II.   The documents cited in the contested decision included:
        D1   US 2008/0226130 A1, published on 18 September 2008

III.   The examining division refused the application on the
        grounds that the subject-matter of the claims of the
        main request and of the independent claims of each of
        auxiliary requests I to III lacked an inventive step
        over the prior art disclosed in document D1.

IV.   In its statement of grounds of appeal, the appellant
        requested that the decision under appeal be set aside
        and a patent be granted on the basis of the main
        request or one of auxiliary requests I and II, all
        three requests as considered in the contested decision
        and resubmitted with the grounds of appeal, or on the
        basis of an auxiliary request III submitted for the
        first time with the grounds of appeal.

V.   In a communication under Article 15(1) RPBA 2020
        accompanying the summons to oral proceedings, the board
        expressed, among other things, its provisional opinion
        that claim 1 of the main request and of each of
        auxiliary requests I to III infringed Article
        123(2) EPC, that claim 1 of the main request was

unclear and that the subject-matter of claim 1 of the
main request and each of auxiliary requests I to III
lacked an inventive step.

VI.   By letter of 9 January 2023, the appellant submitted an
        auxiliary request IV and arguments. It also suggested
        discussing auxiliary request IV, if admissible, before
        the other auxiliary requests.

VII.   Oral proceedings were held as scheduled and the
        appellant was heard on relevant issues. At the oral
        proceedings, the appellant filed an auxiliary request V
        and raised an objection under Rule 106 EPC with the
        following wording (submitted via email to the board):

        "Referring to Rule 106 I herewith raise the objection
        that a fundamental violation of Article 113 occurred.

        1.   Objections under Art. 84 have been raised in the
                oral proceedings for the first time. The
                objections were raised with respect to features
                that were part of the claims as originally filed,
                hitherto unobjected by the first instance and the
                Board.
        2.   The objections were not identified in a specific
                and conclusive manner, but by way of example
                only.
        3.   The Board did not admitt aux. requ. V filed in an
                attempt to address the objections.
        4.   Notwithstanding 3., under the above circumstaces
                the newly raised objections could not reasonaly
                be dealt with under the time constraint of oral
                proceedings.

        Therefore, the case should be remitted to the first
        instance or proceedings be continued in writing.

Refunsal of this request would constitute a fundamental violation of Article 113."

At the end of the oral proceedings, the Chair announced the board's decision.

VIII.   The appellant's final requests were that the decision under appeal be set aside and that a patent be granted on the basis of:
-   the main request or one of auxiliary requests I to III, all four requests submitted with the grounds of appeal or
-   auxiliary request IV submitted with the letter of 9 January 2023 or
-   auxiliary request V submitted during the oral proceedings before the board

The appellant further requested that the case be remitted to the department of first instance for further prosecution on the basis of auxiliary requests IV and V or that the appeal proceedings be continued in writing.

IX.   Claim 1 of the main request reads as follows:
"A visual localization method comprising:
(a)   a server maintaining reference data that can be associated with a plurality of possible locations of a mobile device;
(b)   estimating the location of the mobile device;
(c)   determining subsets of the reference data on the basis of the estimated location of the mobile device;
(d)   pushing the subsets of the reference data from the server to the mobile device;
(e)   the mobile device thereby being preloaded with adaptive partial reference data;

(f)   performing, by the mobile device, a local
       refinement of the estimated location utilizing
       the preloaded adaptive partial reference data,
wherein steps (c), (d) and (f) are repeated
       periodically and step (f) is repeated more
       frequently than steps (c) and (d)."

X.   Claim 1 of auxiliary request I differs from claim 1 of
        the main request in that it adds "and a pose
        estimation" after "a local refinement of the estimated
        location" in step (f) and omits the last feature of
        claim 1 ("wherein steps [...] and (d)").

XI.   Claim 1 of auxiliary request II differs from claim 1 of
        the main request in that it adds the text "to allow for
        a local pose estimation on the mobile device within a
        limited area" at the end of step (d) and amends step
        (f) as in auxiliary request I.

XII.   Claim 1 of auxiliary request III differs from claim 1
        of the main request in that it adds the text "at least
        every 10 seconds for an average motion of the mobile
        device of 1.2 m/s" at the end of step (d) and the text
        "at about 10 times per second" at the end of step (f).

XIII.   Claim 1 of auxiliary request IV reads as follows:
        "A visual localization method comprising:
           using a continuous sequence of images, taken with a
        mobile device, to query a reference database, wherein
        an image is represented by a visual word frequency
        histogram, a Bag-of-Features vector, thereby
        reformulating an image retrieval problem into a text
        retrieval problem, by quantizing high-dimensional
        feature descriptors into visual words and measuring
        similarity between two images by the distance between

their Bag-of-Features vectors, which is computed using inverted files,

    (a) a server maintaining reference data that is associated with a plurality of possible locations of a mobile device;

    (b) estimating the location of the mobile device;

    (c) determining subsets of the reference data on the basis of the estimated location of the mobile device, wherein the determination is performed on the basis of information indicative of the approximate position of the mobile device to enable the server to estimate one or more locations of the mobile device and to select the subsets of the reference data associated with the estimated locations of the mobile device, and wherein said subsets of the reference data include visual words corresponding to the nodes of a binary search tree, and quantizers to obtain said visual words, and at least one inverted file associated with the visual words and/or quantizers, wherein said visual words are selected from a visual vocabulary based on an estimated location of the mobile device such that the visual words represent visual features in the vicinity of the estimated location, thereby reducing the size of the inverted files;

    (d) pushing the subsets of the reference data from the server to the mobile device;

    (e) the mobile device thereby being preloaded with adaptive partial reference data, wherein said adaptive partial reference data is based not on all visual words already transferred to the mobile device but only those that provide a sufficiently high probability of including the correct location;

    (f) performing, exclusively on the mobile device, a local refinement of the estimated location utilizing the preloaded adaptive partial reference data, so that only the reference data within a certain vicinity at

the mobile device is needed for the local refinement of
the location estimate;
wherein steps (c), (d) and (f) are repeated
periodically and step (f) is repeated more frequently
than steps (c) and (d)."

XIV.   Claim 1 of auxiliary request V reads as follows:
        "A visual localization method comprising:
           using a continuous sequence of images, taken with a
        mobile device, to query a reference database,
        wherein an image is represented by a visual word
        frequency histogram, a Bag-of-Features vector, thereby
        reformulating an image retrieval problem into a text
        retrieval problem, by quantizing high-dimensional
        feature descriptors into visual words and measuring
        similarity between two images by the distance between
        their Bag-of-Features vectors,
           (a) a server maintaining reference data that is
        associated with a plurality of possible locations of a
        mobile device;
           (b) determining a subset of the reference data,
        wherein the determination is performed on the basis of
        information indicative of the approximate position of
        the mobile device to enable the server to estimate one
        or more locations of the mobile device and to select
        the subset of the reference data associated with the
        estimated locations of the mobile device, and wherein
        said reference data includes visual words corresponding
        to the nodes of a binary search tree, and quantizers to
        obtain said visual words, and at least one inverted
        file associated with the visual words and/or
        quantizers, wherein said visual words are selected from
        a visual vocabulary based on the estimated location of
        the mobile device such that the visual words represent
        visual features in the vicinity of the estimated
        location,; [sic!]

(c) pushing the subset of the reference data from
the server to the mobile device;

(d) the mobile device thereby being preloaded with
adaptive partial reference data;

(e) performing, exclusively on the mobile device, a
local refinement of the estimated location utilizing
the preloaded adaptive partial reference data, so that
only the reference data within a certain vicinity at
the mobile device is needed for the local refinement of
the location estimate;

wherein steps (b), (c) and (e) are repeated
periodically and step (e) is repeated more frequently
than steps (b) and (c)."

XV.   The appellant's arguments, where relevant to the
        present decision, are discussed in detail below.

Reasons for the Decision

1.   The application relates to a visual localisation method
        for a mobile device (see abstract and claim 1 of the
        main request).

Main request

2.   *Added subject-matter*

2.1   In its communication under Article 15(1) RPBA 2020 the
        board questioned whether the specific combination of
        features of claim 1 was directly and unambiguously
        derivable from the passages cited in the first-instance
        proceedings as a basis for claim 1, namely originally
        filed claims 1 and 4 and the description, page 4, lines
        25 and 28, and pages 6 and 7. The cited passages of the
        description appeared to refer to a specific embodiment
        based on the "Bag-of-Features" (BoF) approach, which

reformulated an image retrieval problem into a text retrieval problem by quantizing the high-dimensional feature descriptors into "visual words" (see the description, page 5, lines 1 to 20). However, claim 1 did not appear to be limited to this embodiment. Consequently, claim 1 of the main request appeared to infringe Article 123(2) EPC.

2.2 In its written response to the board's communication, the appellant did not argue against the board's objection under Article 123(2) EPC for the main request, but filed an amended auxiliary request IV as a direct response to the board's fresh objections under Articles 123(2) and 84 EPC.

2.3 At the oral proceedings, the appellant argued that claim 1 of the main request had a basis in the application as filed. According to the appellant, the board's preliminary opinion did not list all the passages cited as the basis in the first-instance proceedings.

The full basis starting from claim 1 as originally filed was as follows. Feature (a) of claim 1 under discussion was based on claim 1 as originally filed. Step (b) was based on claim 2 as originally filed, which also provided a basis for the amendment made in step (c) of claim 1 under discussion ("on the basis of the estimated location of the mobile device"). Step (d) was based on claim 1 as originally filed, but the word "transmitting" had been amended to "pushing" on the basis of the disclosure on page 4, line 25 of the description as originally filed. Feature (e) was based on page 4, line 28 ("preloaded adaptive vocabularies") of the description as originally filed. Moreover, the expressions "reference data" and "vocabulary" were used

as synonyms in the application as filed (see page 7,
lines 1 to 5 of the description as originally filed).
Step (f) of claim 1 was also based on the passages
cited for feature (e). The last feature of claim 1
("wherein [...] and (d).") was based on claim 4 as
originally filed.

2.4   At the oral proceedings, the board informed the
        appellant that it had doubts that originally filed
        claim 2 could be a basis for steps (b) and (c) of
        claim 1 under discussion. Moreover, the board
        considered that the description disclosed a single
        embodiment relating to the BoF approach, starting on
        page 5 and continuing on pages 6 and 7. This was
        evident, for example, from the first sentence on page 6
        ("It has been found that the performance of a BoF-based
        mobile location recognition system can be improved
        based on the above mentioned feature selection and by
        making use of prior knowledge of the user's location").

2.5   At the oral proceedings, the appellant contested the
        board's reading of the application as filed, insisting
        that the application as filed disclosed the BoF
        approach and the use of an approximate position as two
        different, independent concepts to determine a
        location. The BoF approach served to process the
        reference images into visual features. The appellant
        conceded that originally filed claim 2 disclosed that
        the locations of the mobile device were estimated on
        the server, which was not stated in claim 1. The
        appellant requested an opportunity to file a further
        request if that particular aspect were to be decisive

for Article 123(2) EPC since this issue had been raised
for the first time at the oral proceedings.

2.6   Even though the appellant's arguments were submitted at
        a late stage in the oral proceedings, the board
        admitted them into the appeal proceedings since the
        board had raised a fresh objection under Article 123(2)
        EPC in its communication and since, as a basis for
        claim 1 under discussion, the appellant had referred
        essentially to passages of the application as filed
        that had already been cited in the first-instance
        proceedings.

2.7   However, the board is not convinced that the skilled
        person would directly and unambiguously derive steps
        (b) and (c) of claim 1 of the main request from
        originally filed claims 1 and 2 or any other passage of
        the application as filed cited by the appellant.

2.7.1   Claim 2 as originally filed specifies in more detail
        how a subset of reference data (see step (b) of claim 1
        as originally filed) is determined. According to
        originally filed claim 2, the subset is determined on
        the basis of (1) data received from the mobile device
        representative of one or more visual features or (2)
        information indicative of the approximate position of
        the mobile device, for example a cell ID, or on the
        basis of the combination of options (1) and (2).
        Claim 1 under discussion does not refer to data
        received from the mobile device representative of one
        or more visual features, or to "information indicative
        of the approximate position of the mobile device",
        which is not the same as using an estimated location.
        Consequently, neither of options (1) and (2) is present
        in claim 1.

2.7.2   At the oral proceedings, the appellant argued that
        step (b) of claim 1 under discussion corresponded to
        the estimation of the location of the mobile device by
        the server as disclosed in originally filed claim 2,
        and that it could be claimed as a separate step (b)
        since this step was logically carried out before the
        subsets were determined. However, this argument does
        not explain why it was directly and unambiguously
        derivable to perform the estimation without using any
        of options (1) and (2) disclosed in originally filed
        claim 2. For this reason alone, the board is not
        convinced that claim 1 of the main request meets the
        requirements of Article 123(2) EPC.

2.8   Nor is the board convinced that the skilled person
        would directly and unambiguously derive feature (e) in
        the overall context of claim 1 from the application as
        filed (Article 123(2) EPC). Feature (e) specifies that
        the mobile device is preloaded with "adaptive partial
        reference data". The cited passage on page 4, line 28,
        refers to "preloaded adaptive partial vocabularies",
        i.e. it refers to the BoF approach, which, according to
        page 5, lines 11 to 14, "reformulates the image
        retrieval problem into a text retrieval problem by
        quantizing the high-dimensional feature descriptors
        into so called visual words with the aid of the k-means
        algorithm". Since the "vocabulary" corresponds to a set
        of "visual words", it is part of the BoF approach, but
        this is not specified in claim 1.

2.8.1   The appellant's argument that the expressions
        "reference data" and "vocabulary" were used as synonyms
        in the application as filed is not convincing. For
        example, page 2, line 10 refers to "reference data" in
        the context of the prior art, which is not linked to
        "visual words" or a "vocabulary". By contrast, the

expression "visual words" is used in the context of the
BoF approach in the description (see e.g. page 3,
lines 8 and 9; page 4, lines 12 to 16; page 5, lines 11
to 17). The description introduces the concept of
"adaptive partial vocabularies" starting from page 6,
line 1, where it is explicitly presented as a way of
improving the performance of the BoF approach. The
terminology of "visual words" and "vocabulary" in the
context of image retrieval stems from the use of
retrieval techniques developed originally for text
retrieval, i.e. for documents consisting of words and
document collections defining a vocabulary. As the
application itself explains on page 5, lines 11 to 12,
the "BoF approach reformulates the image retrieval
problem into a text retrieval problem". Consequently,
the skilled person reading the application as filed
would understand that using visual words and a
vocabulary is directly linked to the BoF approach and
would not directly and unambiguously infer that visual
words and a vocabulary are concepts separate from the
BoF approach that could be used in isolation or even
generalised to other content-based image retrieval
approaches using "adaptive partial reference data" in
general.

The fact that the application as filed also uses the
expression "reference data" on page 7, lines 1 to 5
means merely that it uses this more general expression
in the context of the BoF approach. However, the
skilled person would not directly and unambiguously
derive from this passage that "reference data" and
"vocabulary" are used as synonyms; at best they would
infer that a "vocabulary" is a specific example of
"reference data".

2.9   In view of the above, the board concludes that the
        subject-matter of claim 1 of the main request extends
        beyond the content of the application as filed
        (Article 123(2) EPC).

Auxiliary request I

3.   *Added subject-matter*

3.1   The appellant argued that the additional feature "a
        pose estimation" (see point X. above) was disclosed on
        page 4, lines 27 to 28 of the application as filed. The
        cited sentence reads: "The pose estimation is performed
        on the mobile device utilizing these preloaded adaptive
        partial vocabularies." In the board's view, this
        sentence appears to be insufficient as a basis since it
        refers to adaptive partial vocabularies whereas step
        (e) of claim 1 refers to adaptive partial reference
        data (see also points 2.8 and 2.8.1 above).

3.2   Since the appellant did not present any written
        arguments against this objection and relied only on its
        written submissions at the oral proceedings, the board
        concludes that claim 1 of auxiliary request I infringes
        Article 123(2) EPC.

Auxiliary request II

4.   Claim 1 of auxiliary request II differs from claim 1 of
        the main request in that it adds the text "to allow for
        a local pose estimation on the mobile device within a
        limited area" at the end of step (d) and amends step
        (f) as in auxiliary request I (see point XI. above).

5.   *Article 123(2) EPC*

5.1   The objection under Article 123(2) EPC against
        auxiliary request I also applies to auxiliary
        request II as the contested part of the wording of
        claim 1 is identical in both requests. Since the
        appellant did not present any written arguments against
        this objection and relied on its written submissions
        for auxiliary request II at the oral proceedings, the
        board concludes that claim 1 of auxiliary request II
        infringes Article 123(2) EPC.

Auxiliary request III

6.   *Admissibility under Article 12(4) RPBA 2020*

6.1   Current auxiliary request III differs from auxiliary
        request III considered in the decision under appeal in
        that it amends step (f) as detailed above (see point
        XII.).

6.2   The board has discretion under Article 12(4) RPBA 2020
        to admit auxiliary request III. The amendment
        corresponds to an attempt to address a ground for
        refusal of the decision under appeal, and the board
        could easily deal with this request in a procedurally
        efficient manner in the circumstances of this case. In
        view of this, the board admitted auxiliary request III
        into the appeal proceedings.

7.   *Added subject-matter*

7.1   The appellant cited page 8, lines 13 to 16 as a basis
        for the amendments made in auxiliary request III.

7.2   In its preliminary opinion, the board was not convinced
        that the amendments made in claim 1 were directly and
        unambiguously derivable from the cited passage

(Article 123(2) EPC). Page 8, lines 8 to 16 of the
description discloses sending relevant visual words
together with their inverted files at about 10 frames
per second (fps) to the client to allow for local pose
estimation. Moreover, the cited passage refers to
neighbouring panoramas with a distance ranging between
12 and 17 metres. The wording of claim 1 deviates
substantially from this disclosure. For example, it
does not mention a pose estimation, neighbouring
panoramas or visual words and their inverted files.

7.3   The appellant did not submit any arguments in reply to
         the board's objection against auxiliary request III.
         Consequently, claim 1 of auxiliary request III
         infringes Article 123(2) EPC.

Auxiliary request IV

8.   *Admissibility under Article 13(2) RPBA 2020*

         Auxiliary request IV was filed after oral proceedings
         had been arranged, so its admittance is subject to the
         board's discretion on account of the stringent criteria
         set out in Article 13(2) RPBA 2020. Auxiliary
         request IV adds a number of features to independent
         claim 1 which had not been present in the independent
         claims of the claim requests filed with the statement
         of grounds of appeal. Nevertheless, as auxiliary
         request IV constitutes an attempt to overcome
         objections under Articles 84 and 123(2) EPC raised for
         the first time in the board's communication under
         Article 15(1) RPBA 2020, the board admits auxiliary
         request IV into the appeal proceedings.

9.   *Clarity – Article 84 EPC*

9.1   At the oral proceedings, the board raised, for the
        first time, several clarity objections against claim 1
        of auxiliary request IV. Since it is only necessary to
        decide on one of the relevant objections in order to
        arrive at a conclusion on auxiliary request IV, the
        board will in the following only consider the objection
        that the wording "a sufficiently high probability" in
        step (e) of claim 1 of auxiliary request IV is unclear.

9.2   At the oral proceedings, the appellant replied to this
        objection, stating that the contested wording had been
        taken from page 9, lines 4 to 6 of the description. The
        appellant confirmed that this wording could indeed be
        unclear and did not present any arguments against that
        objection. Rather, it requested time to draft and file
        a further auxiliary request, i.e. auxiliary request V,
        in response to the clarity objections raised by the
        board.

9.3   After deliberation, the board confirmed its preliminary
        opinion that a "sufficiently high probability" was not
        clear in the context of claim 1. Consequently, claim 1
        of auxiliary request IV does not meet the requirements
        of Article 84 EPC.

Auxiliary request V

10.   *Admissibility under Article 13(2) RPBA 2020*

10.1   Under Article 13(2) RPBA 2020 any amendment to a
        party's appeal case made after notification of a
        summons to oral proceedings is, in principle, not to be
        taken into account unless there are exceptional
        circumstances, which have been justified with cogent
        reasons by the party concerned.

10.2   Auxiliary request V was filed at the oral proceedings
        after the appellant had been heard on several clarity
        objections raised by the board against claim 1 of
        auxiliary request IV. Consequently, auxiliary request V
        was filed after notification of the summons to oral
        proceedings and Article 13(2) RPBA 2020 applies.

10.3   According to the appellant, auxiliary request V was
        filed in direct response to clarity objections raised
        by the board for the first time at the oral
        proceedings, with a view to overcoming those
        objections. This course of action in the appeal
        proceedings constituted exceptional circumstances.
        Consequently, the appellant's request should be
        admitted into the appeal proceedings under
        Article 13(2) RPBA 2020 in view of the appellant's
        right to be heard.

10.4   With regard to the admissibility of auxiliary
        request V, the board considers that the fact that it
        raised fresh objections under Article 84 EPC against
        claim 1 of auxiliary request IV at the oral proceedings
        does not constitute exceptional circumstances under
        Article 13(2) RPBA 2020, the reasons being as follows.

        Auxiliary request IV was filed for the first time in
        response to the board's communication under
        Article 15(1) RPBA 2020, which had raised fresh issues
        under Article 84 EPC and Article 123(2) EPC.
        Consequently, the oral proceedings were the first
        opportunity for the board to raise objections against
        auxiliary request IV, and the board could be expected
        to raise fresh objections (in particular under Articles
        84 and 123(2) EPC) against this request at the oral
        proceedings, in the event that said request gave rise
        to such objections.

Moreover, the board's clarity objection against auxiliary request IV (see point 9.1 above) falls under the board's clarity objection raised in point 9.3 of its communication under Article 15(1) RPBA 2020 against the word "adaptive" in feature (e) of claim 1, which the appellant tried to overcome with an amendment containing the contested wording "sufficiently high probability" (see the appellant's letter of 9 January 2023, page 5, third paragraph). When the appellant argued in favour of the admissibility of auxiliary request V, it did not explain why the board's clarity objection did not fall under the objections raised in the board's summons.

In the circumstances of the case in hand, the fact that the board raised clarity objections against claim 1 of auxiliary request IV at the oral proceedings merely represents the normal course of action in appeal proceedings that the appellant had to have expected (see also decision T 2214/15, Reasons 5.3 and 5.4). Consequently, no exceptional circumstances can be seen in the course of action taken at the oral proceedings before the board that could justify the admission of auxiliary request V under Article 13(2) RPBA 2020.

10.5   The appellant did not invoke any other exceptional circumstances, nor can the board identify any. For these reasons, auxiliary request V was not admitted into the proceedings under Article 13(2) RPBA 2020.

10.6   The board remarks that for the above consideration of admissibility it is irrelevant whether claim 1 of auxiliary request V at least *prima facie* overcomes any or all of the clarity objections raised by the board for auxiliary request IV.

The objection raised under Rule 106 EPC

11.   At the oral proceedings, the appellant raised an
         objection under Rule 106 EPC (see above, point VII.)
         since, in its opinion, the board had violated its right
         to be heard under Article 113 EPC during the oral
         proceedings before the board.

11.1   The appellant submitted that the amended features were
         in part based on original claims 2 and 3 and argued
         that the board had raised fresh objections under
         Article 84 EPC regarding features of claim 1 of
         auxiliary request IV that had been part of the claims
         as originally filed and had never been objected to
         before.

         In the board's view, this argument is irrelevant for
         the clarity objection considered above under point 9.1,
         which concerned the expression "a sufficiently high
         probability", i.e. an amended part of step (e) of
         claim 1 of auxiliary request IV that was based on the
         description, page 9, lines 4 to 6. The board remarks
         that this argument does not apply to further clarity
         objections raised by the board at the oral proceedings
         against claim 1 of auxiliary request IV either, in
         particular the wording "which is computed using
         inverted files" and the wording of step (b) and step
         (c), first three lines, in combination, since the
         contested wording of claim 1 of auxiliary request IV
         was not present in the claims as originally filed.

11.2   The appellant also argued that the clarity objections
         raised "were not identified in a specific and
         conclusive manner, but by way of example only".

However, the board is under no obligation to raise all possible clarity (or other) objections against a request newly filed during the appeal proceedings, the admissibility of which is to be assessed under Article 13(2) RPBA 2020 and which has been drafted in a way that gives rise to numerous new clarity objections. Hence, it is irrelevant that the board informed the appellant at the oral proceedings that it had identified additional clarity objections as it was sufficient and appropriate to raise only those which the board considered to be particularly relevant for the decision. Moreover, it was apparent to the board that the appellant had understood which features of claim 1 had been objected to and that it had been able to file a further request – auxiliary request V – aimed at overcoming all of the objections raised. Consequently, contrary to the appellant's assertions, it had evidently had enough time to consider the board's objections. Indeed, the appellant requested and obtained a break in the oral proceedings to prepare its auxiliary request V and was able to file this request.

11.3   The board disagrees with the appellant's argument that not admitting auxiliary request V violated the appellant's right to be heard under Article 111 EPC. Article 13(2) RPBA 2020 explicitly specifies that late-filed requests are, in principle, not to be taken into account unless there are exceptional circumstances; there were no exceptional circumstances that needed to be considered for the admissibility of auxiliary request V.

11.4   It is also evident from the reasons given in points 12. and 13. below that, at the oral proceedings, the appellant was heard on its two procedural requests, i.e. the request for the application to be remitted for

further prosecution before the department of first
instance and the request for the appeal proceedings to
be continued in writing. As there is no absolute right
for either a remittal or for continuation in writing,
the board's decision to reject the appellant's
procedural requests does not constitute a violation of
its right to be heard under Article 113(1) EPC.

11.5   In view of the above, the board concludes that there
        has been no violation of the appellant's right to be
        heard in the appeal proceedings. Consequently, the
        appellant's objection under Rule 106 EPC is dismissed.

**The appellant's request for the case to be remitted for further
prosecution to the department of first instance**

12.   Under Article 111(1) EPC, the board has discretion as
        to whether it decides a case itself or remits it to the
        department of first instance. There is no absolute
        right to have an issue decided by two instances (see,
        for example, decisions T 133/87, Reasons 2, and R 9/10,
        Reasons 8 to 10). In the interests of procedural
        economy, the board may decide the case even if a
        decisive issue has not been dealt with by the
        department of first instance (see, for example,
        decision T 1376/07, Reasons 3.2).

12.1   Under Article 11 RPBA 2020, a case is not remitted to
        the department whose decision was appealed for further
        prosecution, unless special reasons present themselves
        for doing so. As a rule, fundamental deficiencies
        apparent in the proceedings before that department
        constitute such special reasons.

12.2   The appellant argued that the decision under appeal was
        based only on inventive step. Consequently, the board

only had to review inventive step in the appeal
proceedings. However, the board had raised fresh
objections under Articles 84 and 123(2) EPC and
admitted auxiliary request IV filed in response to
those fresh objections. Since the first-instance
proceedings dealt with completely different objections
from those raised by the board, it was justified to
remit the case to the department of first instance.

12.3   The board does not consider that the fresh clarity
        objections raised by the board against auxiliary
        request IV could be regarded as a special reason as per
        Article 11 RPBA 2020 for remitting the case. In this
        context, the board notes that auxiliary request IV was
        admitted by the board but gave rise to fresh clarity
        objections. The board consequently raised them as it
        considered that doing so was appropriate and justified
        in order to deal with the appellant's request and bring
        the proceedings to an end.

        Furthermore, the appellant could have submitted its
        request to remit the case for further prosecution on
        the basis of auxiliary request IV as early as with its
        response to the board's preliminary opinion. Since the
        appellant filed a new request, it had to expect that
        this request could give rise to fresh objections. Yet
        it did not submit its request for remittal until a very
        late stage at the oral proceedings, after it had been
        heard on both the clarity issues raised against
        auxiliary request IV and the admissibility of auxiliary
        request V. Consequently, the appellant's request was
        also filed late, which is another reason for rejecting
        it.

12.4   Under these circumstances, the board considers it
        justified to reach a decision on the appeal case

without remittal and rejects the appellant's request
for the appeal case to be remitted to the department of
first instance for further prosecution.

**The appellant's request for the appeal proceedings to be
continued in writing**

13.   The appellant requested that the appeal proceedings be
        continued in writing, thus giving the appellant
        sufficient time to deal with the board's fresh clarity
        objections.

13.1   However, at the end of the oral proceedings, the board
        was in a position to decide on all of the appellant's
        substantive requests, including auxiliary requests IV
        and V, so there was no reason to continue the appeal
        proceedings in writing and delay a decision on the
        appellant's case. Allowing the appellant's request
        would have clearly run counter to the need for
        procedural economy and the public interest that the
        appeal case be settled in due time. Moreover, it
        appears that the appellant had had enough time at the
        oral proceedings to file a further request, namely
        auxiliary request V, in order to deal with all of the
        board's objections. The fact that the board considered
        auxiliary request V to be inadmissible for procedural
        reasons cannot be a reason to continue the appeal
        proceedings in writing in order to give the appellant
        more time to formulate and submit further requests.

13.2   In view of the above, the appellant's request for the
        appeal proceedings to be continued in writing is
        rejected (see also Article 15(6) RPBA 2020).

Conclusion

14.   Since none of the appellant's substantive requests can
         form the basis for the grant of a patent and the
         appellant's procedural requests are rejected, the
         appeal is to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chair:

S. Lichtenvort   J. Geschwind

Decision electronically authenticated