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**Datasheet for the decision
of 23 April 2014**

Case Number: T 2231/09 - 3.5.04

Application Number: 05254923.5

Publication Number: 1640913

IPC: G06T7/00, G06F17/30

Language of the proceedings: EN

Title of invention:

Methods of representing and analysing images

Applicant:

Mitsubishi Electric Information Technology Centre
Europe B.V.
Mitsubishi Electric Corporation

Relevant legal provisions:

EPC 1973 Art. 84, 111(1)
EPC Art. 94(3)
RPBA Art. 11

Keyword:

Claims - clarity and support (no)
Remittal to the department of first instance - fundamental
deficiency in first instance proceedings (no)

Decisions cited:

J 0009/10

Catchword:

see points 2.3 to 2.5



**Beschwerdekammern
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Chambres de recours**

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Case Number: T 2231/09 - 3.5.04

D E C I S I O N
of Technical Board of Appeal 3.5.04
of 23 April 2014

Appellant: Mitsubishi Electric Information Technology
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 9 July 2009
refusing European patent application No.
05254923.5 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman F. Edlinger
Members: A. Dumont
B. Müller

Summary of Facts and Submissions

- I. The applicant appealed against the decision refusing European patent application No. 05254923.5, published as EP 1 640 913 A1.
- II. In a communication dated 21 September 2006 pursuant to Article 96(2) EPC 1973, the EPO, using Form 2001A, informed the applicant that its application did not meet the requirements of the EPC, for reasons already stated in the European search opinion. In a reply received at the EPO on 16 March 2007, the applicant filed observations and amended claims.
- III. In an annex to the summons to oral proceedings and in a subsequent telephone conversation with the primary examiner, the applicant was informed of remaining objections. The applicant filed observations, amended the claims and informed the EPO that it would not be attending the oral proceedings.
- IV. In the oral proceedings, the examining division refused the application on the grounds that the subject-matter of the claims lacked novelty or did not involve an inventive step over the prior art.
- V. The applicant appealed against this decision and filed claims of a main and an auxiliary request.
- VI. In an annex to the summons to oral proceedings, the board observed that the question arose of the interpretation of the expressions "region" and "subset of pixels" in the claims, as did that of whether one of these expressions corresponded to a "neighbourhood" in the concrete examples according to the description. The board concluded that the claims appeared to infringe

Article 84 EPC 1973 (clarity, support by the description).

- VII. With a letter of reply dated 21 March 2014, the appellant filed sets of claims according to a main and a first, second, third and fourth auxiliary request to replace the main and the auxiliary request on file.
- VIII. In the oral proceedings on 23 April 2014, the appellant withdrew the second and third auxiliary requests and filed amended claims 1 to 28 of the fourth auxiliary request which was re-numbered as the (new) second auxiliary request. It complained for the first time about fundamental deficiencies in the first-instance proceedings.
- IX. The appellant requested:
- that the decision under appeal be set aside and that the case be remitted to the department of first instance because of a fundamental deficiency in the first-instance proceedings;
- in the alternative, that the decision under appeal be set aside and the case remitted to the first instance for further prosecution based on established case law regarding inadequate examination or new points raised on appeal requiring substantial amendments; or
- in the alternative, that the decision under appeal be set aside and that the board decide on the grant of a patent on the basis of the claims of either the main request or the first auxiliary request, both filed with the letter of 21 March 2014, or on the basis of the claims of the second auxiliary request submitted in the oral proceedings before the board.

X. Claim 1 according to the main request reads as follows:

"A method of representing an image comprising:
deriving (4100) at least one descriptor (V_i) based on colour information and colour interrelation information for the image, the descriptor being derived using values of pixels in said image and having at least one colour information descriptor element (X_i) capturing colour information for the image and at least one colour interrelation descriptor element (X_i) capturing colour interrelation information for the image, wherein at least one said descriptor element is derived using only a subset of pixels in said image."

XI. Claim 1 according to the first auxiliary request reads as follows:

"A method of representing an image comprising:
deriving (4100) a descriptor (V_i) based on colour information and colour interrelation information for the image, the descriptor being derived using values of pixels in said image, wherein the descriptor (V_i) has at least two descriptor elements, one of said descriptor elements (X_i) capturing colour information for the image and one of said descriptor elements ($X_{2,3,4}$) capturing colour interrelation information for the image, and wherein at least one of said descriptor elements (X_i) is derived using only a subset of pixels in said image."

XII. Claim 1 according to the second auxiliary request reads as follows:

"A method of representing an image comprising:

deriving (4100) a descriptor (V_i) based on colour information and colour interrelation information for the image, the descriptor being derived using values of pixels in said image, wherein the descriptor (V_i) has , a plurality of said descriptor elements (X_1) capturing colour information for the image and a plurality of said descriptor elements ($X_{2,3,4}$) capturing colour interrelation information for the image, and wherein each of a plurality of said descriptor elements (X_i) capturing color information is derived using only a respective one of a plurality of subsets of pixels in said image, said subsets including subsets of different sizes, and each of a plurality of said descriptor elements (X_i) capturing color interrelation information is derived using only a respective one of a plurality of subsets of pixels in said image, said subsets including subsets of different sizes."

XIII. As regards fundamental deficiencies in the first-instance proceedings, the appellant essentially argued as follows:

The first-instance proceedings were tainted by substantial procedural violations because, in view of the case law created by decision J 9/10, the examining division had not issued a formally correct communication under Article 94(3) EPC. Various passages in the Guidelines for Examination (as indicated in the sheet drafted by the representative during the oral proceedings, which was attached to the minutes thereof) confirmed the requirement that a communication under Article 94(3) EPC be sent before a summons to oral proceedings was issued and also confirmed that such summons was not a communication under Article 94(3)

EPC. Furthermore, the objections raised by the examining division were not sufficiently clear and inadequate to enable the representative to discuss the relevant issues with the applicant.

XIV. As regards Article 84 EPC 1973, the appellant essentially argued as follows:

Claim 1 had been amended to delete the reference to a "region", to overcome objections raised by the board. On the basis of paragraph [0074] of the application as published, a region could be synonymous with the whole image. In that case, in the described example (see paragraphs [0020] and [0023]), a subset would correspond to the window specifying a neighbourhood used to calculate the descriptor elements. That neighbourhood was sliding and could be of any size or geometry or at any position in the image (see paragraphs [0033] and [0034]). Thus claim 1 according to the main and first auxiliary requests covered all the embodiments in the description and complied with Article 84 EPC 1973.

Claim 1 according to the second auxiliary request was directed to an embodiment with a plurality of subsets of different sizes being used to derive the descriptor elements, as described in paragraphs [0033] and [0034]. It complied with Article 84 EPC 1973 for the same reason as the higher-ranking requests.

Reasons for the Decision

1. The appeal is admissible.
2. Remittal to the department of first instance

2.1 Pursuant to Article 11 of the Rules of Procedure of the Boards of Appeal ("RPBA"; see OJ EPO 2007, 537) "A Board shall remit a case to the department of first instance if fundamental deficiencies are apparent in the first instance proceedings, unless special reasons present themselves for doing otherwise." The board considers that the term "fundamental deficiencies" referred to in this article and the notion "substantial procedural violation" in Rule 67 EPC 1973, first sentence (now Rule 103(1)(a) EPC) are synonymous (see the German versions of the two provisions where the terms are virtually identical: "wenn das Verfahren ... wesentliche Mängel aufweist" and "wesentlicher Verfahrensmangel", respectively).

The appellant asserted that the proceedings before the examining division were tainted by substantial procedural violations because, in view of the case law created by decision J 9/10, the examining division had failed to issue a formally correct communication under Article 94(3) EPC. Furthermore, the search opinion was very short, and the objections raised by the examining division were not sufficiently clear and inadequate to enable the representative to discuss the issues with the applicant. This meant that the right to a fair hearing had been denied.

2.2 In decision J 9/10 (see point 2.4 of the Reasons) the legal board had to decide in particular what kind of act or acts amounted to the beginning of substantive examination. In this context the board held that a communication using EPO Form 2001A which was attributable only to the formalities officer did not constitute an act of the examining division pertaining to the examination in accordance with Article 94(3)

EPC. Such a communication could thus not be regarded as the beginning of "substantive examination" pursuant to Article 10b(b) of the Rules relating to Fees 1973 (see point 2.9 of the Reasons). The board also held in point 3.2 of the Reasons that the formalities officer's error of judgment did not constitute a substantial procedural violation.

2.3 In the present case, the communication dated 21 September 2006 was issued by the EPO using EPO Form 2001A. The applicant replied to it, addressing the objections made in the earlier European search opinion (essentially lack of conciseness, novelty and inventive step). In the board's view, this search opinion may have been concise, but was not too short for the skilled reader to understand the objections. Subsequently, the applicant also replied to the objections raised in the summons to oral proceedings. The applicant thus obviously regarded the two official communications as invitations by the examining division to file observations and amend the application. This sequence of events reveals that the representative was in a position to discuss the issues with the applicant after the communication of 21 September 2006 was issued, and to draw up pertinent replies. Furthermore, the applicant chose not to attend the oral proceedings, in which the examining division eventually refused the application. There is thus no indication of insufficiently clear or inadequate examination proceedings infringing the applicant's right to be heard.

2.4 Lastly, the appellant did not complain that its right to be heard had been infringed in the examination proceedings in any other way. The board too sees no such violation, or any other indication of a

fundamental deficiency in those proceedings, which would justify remittal (Article 11 RPBA).

- 2.5 Nor is remittal to be ordered due to the fact that the primary examiner may not have authenticated the communication using EPO Form 2001A. That may run counter to the findings in J 9/10, which have been summarised above. Yet, as explained, the board has been unable to discern any indication of an insufficiently clear or an inadequate examination starting *de facto* with the communication using EPO Form 2001A. As a consequence, there would be no causal link between any authentication of the communication using EPO Form 2001A by the formalities officer instead of the primary examiner and the applicant's need to file an appeal. In the absence of such a causal link, remittal under Article 11 RPBA is not appropriate, in analogy to what has been held in the context of the reimbursement of the appeal fee due to a substantial procedural violation (see J 9/10, point 3.1 and the decision cited there).

The board also agrees with J 9/10 (at point 3.2) in that, even if the sole ground of appeal had been the fact that the communication using EPO Form 2001A may have been authenticated not by the primary examiner but by the formalities officer, that would not constitute a procedural violation or fundamental deficiency, but an error of judgment on the part of the formalities officer.

- 2.6 As a consequence, the request for remittal to the first instance because of fundamental deficiencies in the first-instance proceedings has to be refused.

2.7 Article 111(1) EPC 1973 gives the board discretion to remit a case to the department of first instance for further prosecution. A substantial body of case law has developed on this topic. Remittal is not automatic when new facts are introduced by a board (see e.g. Case Law of the Boards of Appeal of the European Patent Office, 7th edition 2013, IV.E.7.2). In the present case, the board raised clarity objections, while the decision under appeal was based on lack of novelty and inventive step. The board's objections arose from an examination of the correct understanding of certain expressions in claim 1 of all requests. In the board's judgement, the objections of this kind did not justify remittal of the case to the department of first instance on the ground that the new points raised caused substantial amendments of the claims. This is because the objections could readily be handled by the board itself.

The request for remitting the case for further prosecution based on established case law therefore has to be refused.

3. Patentability (Article 84 EPC 1973)

3.1 Main request

3.1.1 Claim 1 sets out that "... at least one said descriptor element is derived using only a subset of pixels in said image." The meaning of the expression "subset of pixels" in the context of claim 1, taking account of the description, poses a problem.

3.1.2 According to Article 84 EPC 1973, the "claims shall define the matter for which protection is sought ... and be supported by the description". A certain degree

of generalisation or abstraction may be permitted in a claim. However, features as claimed should make it possible to clearly identify features of embodiments that are covered by the terms of a claim, and the generalised subject-matter as claimed should as a whole make it possible to understand the technical problem to be solved, the problem usually being derived from the description.

3.1.3 In the present case, the description *inter alia* identifies a drawback of the prior-art Haar decomposition, in that all the pixel values within a "region" are used for computing Haar coefficients. The present invention, as described, departs from that prior art by using a reduced size for computing image descriptors, resulting in a reduced computational load (see paragraphs [0011] to [0013] of the application as published). This is further confirmed by the description mentioning "regional descriptor elements" of one type being calculated "using only a subset of the pixels in the respective regions" (see paragraph [0016]). In particular embodiments, the colour information descriptor is calculated using all the pixels (typically four) in a local neighbourhood, which corresponds to a "region" according to claim 1 as originally filed, whereas a colour interrelation descriptor element is typically calculated using only some of the pixels (typically two) in the neighbourhood, which correspond to a "subset" according to claim 1 as originally filed (see for instance paragraph [0020] for the first embodiment).

3.1.4 The board notes that this was also how the applicant/appellant explained the invention in the examination proceedings (see for instance section 1.2 in the letter of 29 May 2009), as well as in the statement of grounds

of appeal (see page 2, last paragraph thereof), with the image comprising at least one region, and the description element(s) being derived using only a subset of pixels in said region.

3.1.5 The appellant amended claim 1 and put forward a different interpretation, to the effect that the "subset" specified in claim 1 as amended according to the present main request should now correspond to (all) the pixels of a window specifying a "local neighbourhood" in the description. This interpretation of a "subset" essentially relies on a single sentence in paragraph [0074] of the description mentioning that a "region" could mean the whole image. This very particular case suppresses the intermediate division of the image into regions.

3.1.6 However, this suppression poses a problem of correspondence with features of the described embodiments, where a "region" corresponds to a local neighbourhood and a subset corresponds to only some of the pixels of the region, as can be understood from the passages of the description mentioned above.

3.1.7 Adopting the appellant's interpretation would also be at odds with passages in the description (see in particular paragraphs [0033] and [0034]) mentioning that neighbourhood windows, i.e. regions in the context of these paragraphs, could be of any size, geometry or location. A sliding window specifying the neighbourhood would also not make technical sense in the case of a single region covering the whole image (see paragraph [0023]).

3.1.8 As a result, the appellant's interpretation of a "subset" and the corresponding amendment of claim 1,

based on a single sentence in paragraph [0074] of the description, is inconsistent with the understanding of regions, neighbourhood windows and subsets in essential parts of the described embodiments. It follows that the technical meaning of a "subset" becomes obscure. The subject-matter of claim 1 is thus not clear when interpreted in the light of the description.

3.1.9 The requirements of clarity and support by the description in Article 84 EPC 1973 are designed to reflect the principle that the terms of a claim should be commensurate with, or be justified by, the invention's technical contribution to the art. From the passages of the description mentioned above, in particular the drawbacks ascribed to the prior-art Haar decomposition, the board regards a division of the image into regions and subsets as essential for achieving the technical effect underlying the invention with which the application is concerned (using only a subset of pixels in a region of the image in claim 1 as originally filed). The subject-matter of claim 1 is thus also not supported by the description.

3.1.10 In conclusion, the main request is not allowable because its claim 1 does not comply with Article 84 EPC 1973.

3.2 First auxiliary request

3.2.1 Claim 1 sets out that "... at least one of said descriptor elements (X_i) is derived using only a subset of pixels in said image." The appellant agrees that, in respect of the above objections under Article 84 EPC 1973, essentially the same arguments apply as for the main request.

3.2.2 As a result, the first auxiliary request is not allowable because its claim 1 does not comply with Article 84 EPC 1973, for the reasons set out above.

3.3 Second auxiliary request

3.3.1 The appellant agrees that each of the subsets in claim 1 according to the second auxiliary request is to be interpreted in the same way as the subset in claim 1 of the higher-ranking requests, so that the reasoning above again applies.

3.3.2 As a result, the second auxiliary request is not allowable because its claim 1 does not comply with Article 84 EPC 1973.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



K. Boelicke

F. Edlinger

Decision electronically authenticated