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Datasheet for the decision
of 21 September 2012

Case Number:	T 1784/06 - 3.5.01
Application Number:	03396071.7
Publication Number:	1496452
IPC:	G06F 17/30, H04M 15/00
Language of the proceedings:	EN

Title of invention:
Method and computer program product for classification and
linking data records, and a classification system

Applicant:
Comptel Corporation

Headword:
Classification method/COMPTEL

Relevant legal provisions:
EPC Art. 52(1)(2)(3)

Relevant legal provisions (EPC 1973):
EPC Art. 56, 112(1)(a)

Keyword:
"*Comvik* approach - interrelationship of Article 52(1)(2)(3)
EPC and Article 56 EPC 1973 (yes)"
"Referral of questions to the Enlarged Board of Appeal (no)"
"Inventive step (no)"

Decisions cited:
G 0001/08, G 0003/08, T 0072/95, T 1173/97, T 0641/00,
T 0258/03, T 0154/04, T 1227/05, T 0473/08

Catchword:
See points 9 to 12 of the Reasons

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Case Number: T 1784/06 **-** 3.5.01

D E C I S I O N
of the Technical Board of Appeal 3.5.01
of 21 September 2012

Appellant: Comptel Corporation
(Applicant)   Lapinrinne 3
                        00100 Helsinki   (FI)

Representative: Tiilikainen, Jarkko Tapio
                        Seppo Laine Oy
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                        00180 Helsinki   (FI)

Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted 16 June 2006
refusing European patent application
No. 03396071.7 pursuant to Article 97(1) EPC
1973.**

Composition of the Board:

Chairman: S. Wibergh
Members: K. Bumes
               G. Weiss

Summary of Facts and Submissions

I.   This appeal is against the decision of the examining
       division to refuse European patent application
       No. 03396071.7, entitled "*Method and computer program
       product for classification and linking data records,
       and a classification system*", for lack of inventive
       step (Articles 52(1) and 56 EPC 1973).

II.   According to the examining division, a skilled person
       classifying a data record and setting out from a
       decision tree according to

                   D1: US-A-6 055 539

       would look for an alternative classification algorithm
       and would seek to process the data record as quickly as
       possible, in particular in a parallel manner. Such an
       approach might be obviously realised by first judging
       individual fields of the data record in parallel and
       then determining, in a final step, the overall class of
       the data record by collating the individual judgements.

III.   According to the appellant, a skilled person's natural
       approach would be to improve the decision tree of D1
       rather than replace it with a totally new structure.
       A problem solved vis-à-vis D1 can be seen in providing
       a method in which the classification rules are easier
       to adapt. The method should be efficient in classifying
       records even where are large number of possible service
       classes exist. To arrive at the classification method
       of the present application, the inventor had to go
       through a number of steps beyond usual engineering work;
       in particular he had to reject the conventional
       decision-tree classifier as the most promising
       classification technique.

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IV.   In a communication under Rule 100(2) EPC, the Board
       raised doubts about the technical character of the
       mathematical algorithm on which the claimed
       classification method was based. The purpose of the
       algorithm --- classifying data records --- appeared
       non-technical as no technical use of the classified
       data records was disclosed; according to the
       description, the classification prepared rating and
       billing procedures. The sheer speed of the algorithm
       did not convey a technical character.

       Consequently, the algorithm would not enter into the
       examination for inventive step, whereas its technical
       implementation by means of a computer program was a
       commonplace way of running an algorithm automatically.

V.   In response to the Board's communication, the appellant
       submitted the following arguments.

(a)   The appellant contended that none of the features in
       claim 1 (main request) could be ignored when
       determining the inventive step as there were technical
       considerations involved with respect to each and every
       feature and in the method as a whole. The claimed
       invention provided instructions of technical
       significance to a person skilled in the art of
       developing computer systems. Only technically
       meaningful operations were claimed, and the invention
       provided a more efficient way to solve the technical
       problem of classifying records.

(b)   Moreover, the appellant voiced fundamental doubts about
       the so-called COMVIK approach, i.e. about the exclusion

of non-technical aspects when subject-matter is assessed under the inventive step requirement of Article 56 EPC 1973, an approach prominently expressed by decision T 641/00-*Two identities/COMVIK*, Headnote 1 (OJ EPO 2003, 352).

(b1)   According to the appellant, Article 56 EPC 1973 should be applied independently of Article 52(1)(2)(3) EPC: Once subject-matter as a whole was found to meet the technology criterion of Article 52(1)(2)(3) EPC, the subject-matter as a whole should be examined for the presence of an inventive step (Article 56 EPC 1973). A separation into technical and non-technical features at the latter stage of the examination was not justified by the EPC or its *travaux préparatoires* (appellant's reply dated 25 April 2012, pages 4 to 6, section 2.1 "*Relation between Articles 52(2) and 56 EPC*").

(b2)   Regarding the Board's insistence on a technical problem when applying the problem-and-solution approach, the appellant disputed that such a requirement could be deduced from the EPC or introduced from its Implementing Regulations such as Rules 42, 43 EPC (reply dated 25 April 2012, pages 8/9, section 3 "*Technical Problem Requirement When Examining Article 56 EPC*").

(b3)   Further, the appellant quoted a number of decisions handed down by other Boards in order to demonstrate that the COMVIK approach was not applied uniformly by the Boards of Appeal. According to the appellant, other Boards accepted non-technical problems as the objective problem (reply dated 25 April 2012, pages 9 to 18).

Therefore, the appellant formulated five questions for referral to the Enlarged Board of Appeal should the Board be minded not to acknowledge the inventive step of its main request. The questions were said to relate to points of law of fundamental importance and to be important to ensure uniform application of the law (reply dated 25 April 2012, pages 20/21, "*Additional Requests*").

The appellant considered those questions to be implicitly suggested by Opinion G 3/08 of the Enlarged Board of Appeal (appellant's reply dated 25 April 2012, centre of page 21; pages 3/4). Points 10.13.1 and 10.13.2 of the Opinion were said to show reservations vis-à-vis the *Comvik* approach:

> G 3/08, point 10.13.1: "[...] While it is not the task of the Enlarged Board in this Opinion to judge whether this system [of considering subject-matter listed in Article 52(2) EPC when assessing inventiveness] is correct [...]"

> G 3/08, point 10.13.2: "[...] it is somewhat surprising that the referral does not address any of its questions to the validity of this way of judging an inventive step, an issue which is surely of general interest [...]"

(b4)   The five questions proposed by the appellant for referral to the Enlarged Board of Appeal are as follows:

Q1: Is the requirement of Article 56 EPC [1973] an independent requirement of substantial patent law or is it to be examined together with the requirements imposed in Article 52(2) and (3) [EPC]?

Q2: Can a condition laid down in the Implementing Regulation[s] be taken into account when examining a substantial requirement of patentability, in particular

the requirement of inventive step laid down in Article
56 EPC [1973]?

Q3: Can a feature relating to excluded subject-matter
listed under Article 52(2) EPC be omitted when
examining other substantial requirements of
patentability, in particular inventive step under
Article 56 EPC [1973]?

Q4: If question Q3 is answered in the affirmative, what
are the conditions on which such an omission from the
examination can and should be made? Furthermore, what
consequences does the narrow interpretation stipulated
in Article 52(3) [EPC] have to this examination?

Q5: When using the problem-solution approach in the
determination of an inventive step, is it an admissible
and necessary requirement that the problem to be solved
be technical in its nature in a sense that it resides
in a field not excluded by Article 52(2) [EPC]?

VI.   The Board summoned the appellant to oral proceedings as
       requested on an auxiliary basis. In an annex to the
       summons, the Board expressed its preliminary opinion
       that a referral of questions to the Enlarged Board of
       Appeal did not appear necessary since the *Comvik*
       approach (T 641/00) for assessing mixtures of technical
       and non-technical features appeared to be clear and
       seemed to be applied consistently by the Boards of
       Appeal.

       Where an intrinsically non-technical solution
       (mathematical algorithm) sought to derive a technical
       character from the problem solved, the problem had to

be technical. This seemed to be the crucial point of
the present case. The Board tended not to consider the
sorting of data records as an inherent technical goal
which by itself might confer a technical character onto
the mathematical algorithm involved.

VII.   By a fax dated 6 September 2012, the appellant informed
       the Board that it would not attend the oral proceedings.

       The appellant emphasised that comparative tests had
       shown that the claimed classifying algorithm provided
       enhanced efficiency and was almost totally immune to
       variations in the number of classes whereas the
       performance of prior art solutions almost collapsed
       when the number of classes increased. Therefore, the
       invention provided a more quickly working computer
       algorithm for modern telecommunications classification
       purposes and thus provided technical effects of reduced
       power consumption and enhanced processing power in a
       given hardware.

       The appellant maintained all previous requests (as
       listed below) and submitted additional auxiliary
       requests reducing all claim sets to their respective
       first claim (in order to avoid a situation in which a
       patent could not be granted due to a mere formal issue
       in a dependent claim).

VIII. Oral proceedings were held in the appellant's absence,
       based on the state of the file. In the course of the
       appeal procedure, the appellant had requested in
       writing that the decision under appeal be set aside,
       and had presented the following requests:
       - Grant of a patent on the basis of the claims of the

main request underlying the decision under appeal.

- Remittal to the first instance with the order that
the claims of the main request fulfil the requirement
of Article 56 EPC 1973.

- Referral to the Enlarged Board of Appeal of the five
questions formulated in the letter dated 25 April 2012.

- Grant of a patent on the basis of the claims of
auxiliary request 1 underlying the decision under
appeal.

- Remittal to the first instance with the order that
the claims of auxiliary request 1 underlying the
decision under appeal fulfil the requirement of Article
56 EPC 1973.

- Grant of a patent on the basis of the claims of
auxiliary request 2 underlying the decision under
appeal.

- Remittal to the first instance with the order that
the claims of auxiliary request 2 underlying the
decision under appeal fulfil the requirement of Article
56 EPC 1973.

- Grant of a patent on the basis of the claims of
auxiliary request 3 underlying the decision under
appeal.

- Remittal to the first instance with the order that
the claims of auxiliary request 3 underlying the
decision under appeal fulfil the requirement of Article
56 EPC 1973.

Four additional auxiliary requests, filed with the fax
dated 6 September 2012, sought the grant of a patent on
the basis of:

- claim 1 of the main request underlying the decision
under appeal, all the subsequent claims of this request
being withdrawn, or

- claim 1 of the first auxiliary request underlying the
decision under appeal, all the subsequent claims of
this request being withdrawn, or
- claim 1 of the second auxiliary request underlying
the decision under appeal, all the subsequent claims of
this request being withdrawn, or
- claim 1 of the third auxiliary request underlying the
decision under appeal, all the subsequent claims of
this request being withdrawn.

Claim 1 according to the main request reads:
"1. A method for classifying records by means of a
computer program product, comprising
- receiving records containing several fields, the
fields of which records contain values,
- reading the values contained in at least two
specified fields from each received record, and
- classifying the received records using a
classification structure containing conditions, the
classification structure containing field-specific
classification structures such that there is an own
field-specific classification structure for each field
according to the conditions of the classification
structure,
characterized by
- selecting field-specific classification structures
corresponding to the specified fields, and
- for each record:
    - searching from the selected classification
structures a set of suitable classes for each of the
specified fields, wherein the suitable classes
correspond to the value read from the field,
    - forming an intersection set of the sets of
suitable classes, and

- selecting a class from the intersection set and classifying the record into the selected class."

The first auxiliary request amends the first paragraph of the aforementioned claim 1 (main request) as follows: "1. A method of classifying telecommunications network event description records in a mediator system of a telecommunications network by means of a computer program product, comprising"

Claim 1 according to the second auxiliary request reads: "1. A method for classifying records by means of a computer program product, comprising
- receiving records containing several fields, the fields of which records contain values,
- reading the values contained in at least two specified fields from each received record, and
- classifying the received records using a classification structure containing conditions, wherein the conditions have been formed based on conditional statements for the classes, said conditional statements having differing accuracies, in which the accuracy tells how many different fields of the record are used in the conditional statement of the class, and wherein the classification structure contains field-specific classification structures such that there is an own field-specific classification structure for each field according to the conditions of the classification structure,
        characterized in that for classifying the received records, the method comprises selecting field-specific classification structures corresponding to the specified fields and for each record:
- searching from the selected classification structures

a set of suitable classes for each of the specified
fields, wherein the suitable classes correspond to the
value read from the field, and adding each set of
suitable classes into a field-specific table,
- performing an intersect operation between the field-
specific tables and selecting a class based on the
result thereof by performing the steps of:
      - collecting in a valid-set table the numbers of
occurrences of the various classes in the field-
specific tables, and
      - selecting the class having the greatest number
of occurrences and for which the number of occurrences
is the same as the number of different fields appearing
in the conditional statement of the class, and
- classifying the record into the selected class."

The third auxiliary request amends the first paragraph
of the aforementioned claim 1 (second auxiliary request)
as follows:
"1. A method of classifying telecommunications network
event description records in a mediator system of a
telecommunications network by means of a computer
program product, comprising".

Reasons for the decision

1.   *The application*

      The application was published as
            A1: EP-A1-1 496 452 (12 January 2005).
      It concerns data records, in particular data records
      describing telecommunication network events, that are
      sorted ("*selected*") into service classes, in particular

for rating and billing purposes (A1, e.g. paragraph 0002; original claims 9, 11, 25, 31). Identifying the class of a service from a data record forms a performance bottleneck once the number of services is increased to the thousands (paragraph 0007). Therefore, the application seeks to provide a method which can handle large numbers of service classes more efficiently (paragraph 0009) than the conventional use of conditional statements does (paragraph 0008). According to paragraph 0010, the solution is based on reducing, as a first step, a large number of service classes into specific sets. These sets are then intersected in a final step. According to paragraph 0012, this algorithm classifies data records more efficiently.

Figure 3 (as described in paragraphs 0051 to 0056 of A1) provides exemplary classifier tables (or, in terms of claim 1, "*classification structures*") for classifying a data record comprising two fields "DURAT" and "VOLUME", i.e. the duration and data volume of a telecommunication connection. Classifier tables are provided for each field to assign various candidate service classes to different values of the field. For example, according to a classifier table provided for the "DURAT[ION]" field, a numerical value of 222 indicates that the telecommunications connection may be classified as service type A or B or C or D. According to a classifier table provided for the field "VOLUME", an exemplary numerical value of 170 indicates that the telecommunications connection may be classified as service type C or I. By intersecting the sets {A, B, C, D} and {C, I} of candidate classes, an applicable (or "valid") service class of the telecommunication

connection represented by the data record is found: it
is class C as the applicable class (or classes) must be
present in all sets. If two (or more) classes result
from intersecting the sets of candidate classes, a
disambiguation may be achieved in particular by
selecting the class having the greatest accuracy (see
A1, e.g. original claim 15 and paragraphs 0013, 0032,
0033).

2.   *The COMVIK approach to assessing inventive step under
        Article 56 EPC 1973*

        The Board stands by the *Comvik* approach that only
        features contributing to the technical character of
        claimed subject-matter enter into the examination for
        inventive step, see T 641/00-*Two identities/COMVIK*,
        OJ EPO 2003, 352, point 6:

        "... where a feature cannot be considered as
        contributing to the solution of any technical problem
        by providing a technical effect it has no significance
        for the purpose of assessing inventive step."

2.1   As patents can be granted only for technical subject-
        matter (Article 52(1)(2)(3) EPC), it is consequential
        that a (non-obvious) contribution which justifies the
        grant of a patent has to have a technical character. It
        would appear paradoxical to the Board to recognise an
        inventive step on the basis of a non-technical
        innovation (such as an organisational, administrative,
        commercial or mathematical algorithm) having no
        technical implication other than the (obvious) desire
        for its implementation on a general-purpose computer.

        Already before the *Comvik* decision, technically non-
        functional modifications were considered as irrelevant

to inventive step (see e.g. T 72/95 dated 18 March 1998,
point 5.4).

2.2   According to the appellant, claimed subject-matter as a
        whole should be examined for the presence of an
        inventive step once the subject-matter as a whole has
        been found to meet the technology criterion of Article
        52(1)(2)(3) EPC. The appellant argues that Article 56
        EPC 1973 should be applied independently of Article
        52(1)(2)(3) EPC because Article 52(2) EPC has to be
        applied independently of Article 56 EPC 1973 (reply
        dated 25 April 2012, e.g. page 4, lines 15 to 21;
        bottom of page 21).

        The Board does not accept such formal reasoning and
        points out that it is normal and often necessary for
        legal provisions to be in an asymmetric relationship or
        hierarchical dependency. For example, the novelty of a
        claim has to be examined independently of inventive
        step considerations, whereas a finding of inventiveness
        presupposes a novelty examination. Another example is
        the validity of a priority claim which has to be
        checked independently of novelty and inventive step
        requirements, whereas novelty and inventive step cannot
        be established independently of the validity of a
        priority right.

2.3   Regarding the Board's insistence on a technical problem
        when applying the problem-and-solution approach, the
        appellant disputes that such a requirement can be
        deduced from the EPC or introduced from its
        Implementing Regulations. The appellant refers *inter
        alia* to decision T 473/08 (by a different Board of
        Appeal) to point out that "a non-technical problem can

have a technical solution".

However, there is no divergence, the Board agrees to
the statement that a non-technical problem can have a
technical solution. On the other hand, where an
intrinsically non-technical solution (mathematical
algorithm) seeks to derive a technical character from
the problem solved, the problem must be technical. This
is the point on which the present case hinges.

2.4   Another argument of the appellant refers to the
        legislative history of the EPC (*travaux préparatoires*)
        which is said not to provide any explicit support for a
        cumulative application of Article 52(2) EPC and Article
        56 EPC 1973.

        However, the restriction of substantive patent law to
        technical subject-matter is so self-evident that the
        founding fathers of the EPC did not even mention that
        requirement in the original (1973) version of Article
        52(1). The explicit clause "*in all fields of
        technology*" was not added to Article 52(1) until the
        Diplomatic Conference in the year 2000 harmonised the
        Article with the TRIPs treaty (see OJ EPO 2007, Special
        Edition 4, page 48). Nevertheless, Article 52(1) EPC
        has always been understood as referring to technical
        inventions.

        Similarly, in the Board's understanding, it is implicit
        to the patent system under the EPC that only
        contributions to a field of technology --- escaping the
        list of non-inventions --- justify patent protection.

2.5   Opinion G 3/08 of the Enlarged Board of Appeal backs
        the *Comvik* approach rather than raising any objection
        to it. This becomes clear when points 10.13.1 and
        10.13.2 of the Opinion are read to the end (*italics*
        added by the Board):

> G 3/08, point 10.13.1: "[...] However, this does
> not mean that the list of subject-matters in Article
> 52(2) EPC (including in particular "programs for
> computers") has no effect on such claims. An elaborate
> system for taking that effect into account in the
> assessment of whether there is an inventive step has
> been developed, as laid out in T 154/04, Duns. While it
> is not the task of the Enlarged Board in this Opinion
> to judge whether this system is correct, since none of
> the questions put relate directly to its use, *it is
> evident from its frequent use in decisions of the
> Boards of Appeal that the list of "non-inventions" in
> Article 52(2) EPC can play a very important role in
> determining whether claimed subject-matter is
> inventive*."

> G 3/08, point 10.13.2: "[...] The Board can only
> speculate that the President could not identify any
> divergence in the case law on this issue, despite the
> fact that (at present) approximately seventy decisions
> issued by a total of fifteen different Boards (in the
> sense of organisational units) cite T 641/00, COMVIK
> (OJ EPO 2003, 352), and over forty decisions by eight
> Boards cite T 258/03, Hitachi, the decisions which
> essentially defined the approach. *Nor is the Enlarged
> Board aware of any divergence in this case law,
> suggesting that the Boards are in general quite
> comfortable with it. It would appear that the case law,
> as summarised in T 154/04, has created a practicable
> system for delimiting the innovations for which a
> patent may be granted*."

Main request

3.   *Article 56 EPC 1973 - Inventive step*

3.1   In the Board's judgement, the algorithm underlying the
        claimed classification method lacks technical character.

3.1.1   As the algorithm is a mathematical (*inter alia* Boolean)
        method and mathematical methods as such are deemed to
        be non-inventions (Article 52(2)(3) EPC), a technical
        character of the algorithm could be recognised only if
        it served a technical purpose (see e.g. T 1227/05-
        Circuit simulation I/INFINEON, point 3.1, OJ EPO 2007,
        574).

        However, the automatic classification of data records
        according to claim 1 serves only the purpose of
        classifying the data records, without implying any
        technical use of the classification. The claim covers
        any non-technical (e.g. administrative or commercial)
        use of the classified data records. In the light of the
        description, the classification method prepares rating
        and billing procedures. Therefore, the Board does not
        consider the result of the algorithm --- a set of
        classified data records --- as technical.

3.1.2   Enhanced speed of an algorithm, as compared to other
        algorithms, is not sufficient to establish a technical
        character of the algorithm (see T 1227/05, point 3.2.5).

        If a computer-implemented algorithm runs more quickly,
        the resulting saving in energy is a technical effect
        inherent to the normal interaction of software and
        hardware, i.e. it is not a "further" technical effect
        of the algorithmic program controlling the computer
        (see T 1173/97-*Computer program product/IBM*, OJ EPO
        1999, 609).

3.1.3   The claimed algorithm may allow a data record to be
        processed in a parallel computer architecture as the
        various fields of a data record can be judged

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separately in a first level of processing. However, claim 1 is not limited to an implementation on a parallel hardware structure. In fact, the application as a whole is silent on parallel data processing. (Parallel processing has been mentioned by the decision under appeal and addressed by the statement setting out the grounds of appeal.)

3.1.4   The application may disclose a robust algorithm which is immune to variations in the number of classes to be recognised. This may be a valuable mathematical property of the algorithm and would imply technical benefits when used for a technical purpose. However, claim 1 is not limited to any technical application of its classification method. According to the description, the data records are classified for the non-technical purpose of billing.

3.1.5   As the algorithm of claim 1 does not contribute to the technical character of the classification method, it does not enter into the examination for inventive step.

3.2   On the (technical) implementation level, the general idea of performing an algorithm by means of a computer program product is a commonplace way of running an algorithm automatically.

3.3   The appellant contends that only technically meaningful operations requiring technical considerations are claimed. The claimed invention is said to provide instructions of technical significance to a person skilled in the art of developing computer systems.

However, in the Board's judgement, technical considerations come into play only at the level of implementation of the algorithm. In this respect, the application presupposes that a skilled programmer knows how to implement the algorithm on a general-purpose computer. Regarding the design of hardware, the application fails to provide any instruction to the skilled person.

3.4   Therefore, the Board does not see any inventive technical contribution, and the requirement for an inventive step (Article 56 EPC 1973) is not met.

First auxiliary request

4.   Claim 1 according to the first auxiliary request sets out from claim 1 of the main request and specifies the data records as "*telecommunications network event description records in a mediator system of a telecommunications network*" (based on original claims 17 and 28 and paragraphs 0109/0110 of the description in A1). Thus, the origin of the data records is defined such as to suggest a technical meaning of the data.

5.   The pre-characterising (i.e. conventional) feature that data records are assembled from network events may imply technical aspects but does not alter the finding that the claimed method classifies the data records for the sake of classifying rather than for any technical purpose. The classification method keeps its administrative nature from which the classification algorithm cannot derive a technical character. Therefore, the classification algorithm cannot form an inventive contribution even where the data records have been derived from technical events in a

telecommunications network.

Second auxiliary request

6.   Claim 1 according to the second auxiliary request sets
        out from claim 1 of the main request and specifies
        steps of the classification algorithm in greater detail.

        Again, the claimed classification method is not
        restricted to any technical purpose of its
        administrative result. Therefore, the detailed
        algorithm which makes up the classification method does
        not enter into the examination for inventive step.

Third auxiliary request

7.   Claim 1 according to the third auxiliary request
        combines the amendments made by the first and second
        auxiliary requests. Therefore, the same objections
        apply since even the combined amendments do not alter
        the administrative nature of the algorithm claimed.

8.   The Board thus concludes that none of the four versions
        of claim 1 involves an inventive step.

**Request for referral of questions to the Enlarged Board
of Appeal**

9.   The appellant has formulated five questions for
        referral to the Enlarged Board of Appeal under Article
        112(1)(a) EPC 1973. The questions are said to relate to
        points of law of fundamental importance and to be
        important to ensure uniform application of the law.

10.   The appellant quotes a number of decisions handed down
        by other Boards in order to demonstrate that the *Comvik*
        approach is not applied uniformly by the Boards of
        Appeal in that other Boards accept non-technical
        problems as the objective problem. The appellant refers
        inter alia to decision T 473/08 (by a different Board
        of Appeal) to point out that "a non-technical problem
        can have a technical solution".

10.1   However, there is no divergence. The Board agrees to
        the statement that a non-technical problem can have a
        technical solution (assuming that a problem properly
        formulated with respect to the closest prior art can
        ever be of a completely non-technical nature). On the
        other hand, where an intrinsically non-technical
        solution (mathematical algorithm) seeks to derive a
        technical character from the problem solved, the
        problem must be technical. Otherwise, the solution
        remains non-technical and does not enter into the
        examination for an inventive step.

10.2   To the Board's knowledge, the other Boards of Appeal
        also apply Article 56 EPC 1973 in the light of Article
        52(1)(2)(3) EPC, i.e. the *Comvik* approach is shared by
        all Boards. Opinion G 3/08 (see point 10.13.2) did not
        identify any divergence in the case law on this issue.

        Nor does the Board deviate from an interpretation or
        explanation of the Convention contained in an earlier
        opinion (in particular G 3/08) or decision of the
        Enlarged Board of Appeal (see point 2.5 *supra*).

        Thus, the *Comvik* approach does not require any further
        harmonisation or clarification by the Enlarged Board of

Appeal.

11.   The Board considers the proposed questions to relate to
        points of policy and legislation rather than points of
        the existing law. Only the legislators would be
        entitled to expand the legal definition of inventions
        such as to provide patent protection on the basis of
        non-technical contributions (to encourage their
        publication and dissemination, for example). However, a
        referral of questions to the Enlarged Board of Appeal
        for legislative purposes would not be admissible.

11.1   The first question (Q1) asks whether the requirement of
        Article 56 EPC 1973 is an independent requirement of
        substantive patent law or whether it is to be examined
        together with the requirements imposed in Article 52(2)
        and (3) EPC.

        As noted above (cf point 2.5), in Opinion G 3/08 the
        Enlarged Board of Appeal noted that the jurisprudence
        of the Boards of Appeal recognises a relationship
        between Articles 52(2) and 56 EPC:
        "... it is evident from its frequent use in decisions
        of the Boards of Appeal that the list of 'non-
        inventions' in Article 52(2) EPC can play a very
        important role in determining whether claimed subject-
        matter is inventive" (point 10.13.1).

        Indeed, it would appear illogical to recognise an
        inventive step on the basis of a non-technical
        contribution for which no patent protection is
        available "as such". Hence, question 1, insofar as it
        has not already been answered by the Enlarged Board of
        Appeal, effectively aims at opening the European Patent

Convention to non-technical innovations. This would exceed the competence of the Boards of Appeal (including the Enlarged Board of Appeal).

11.2   The second question (Q2) asks whether a condition laid down in the Implementing Regulations can be taken into account when examining a substantive requirement of patentability, in particular the requirement of inventive step laid down in Article 56 EPC 1973.

The background of this question is that Rules 27 and 29 EPC 1973, for example, were often cited by Boards of Appeal to underpin the requirement for a *technical* invention when interpreting Article 52(1) EPC 1973 (see eg T 154/04-*Estimating sales activity/DUNS LICENSING ASSOCIATES*, OJ EPO 2008, 46, Reasons point 8).

This question, however, was already answered by the Enlarged Board of Appeal in decision G 1/08-*Tomatoes/STATE OF ISRAEL*, OJ EPO 2012, 206, point 2.2:

"It is the function of the Implementing Regulations to determine in more detail how the Articles should be applied and there is nothing in the Convention allowing the conclusion that this would not also apply in the case of Articles governing issues of substantive patent law".

11.3   The third question (Q3) asks whether a feature relating to excluded subject-matter listed under Article 52(2) EPC can be omitted when examining other substantive requirements of patentability, in particular inventive step under Article 56 EPC 1973.

The answer to this question is implied by the answer to the first question: as Article 56 EPC 1973 cannot be applied independently of the list of non-inventions according to Article 52(2)(3) EPC, such non-inventions have to be disregarded in the examination for inventive step.

11.4   The third question having been answered in the affirmative, the fourth question (Q4) also needs to be considered. It asks on what conditions such an omission from the examination can and should be made and what consequences the narrow interpretation stipulated in Article 52(3) EPC has to this examination.

Article 52(3) EPC limits the non-inventions listed in Article 52(2) EPC to subject-matter lacking a concrete and technical character. This understanding of Article 52(2) EPC is part of the "*practicable system for delimiting the innovations for which a patent may be granted*", as already identified by the Enlarged Board of Appeal (G 3/08, point 10.13.2). As to Article 52(3) EPC the Board cannot see why this stipulation should be considered at all in this context. Nor, apparently, could the Enlarged Board of Appeal in Opinion G 3/08 when, in connection with inventive step, it referred to "the list of 'non-inventions' in Article 52(2) EPC" without mention of Article 52(3) EPC (cf point 11.1 above).

11.5   The fifth question (Q5) relates to the problem-solution approach in the determination of an inventive step and asks whether it is an admissible and necessary requirement that the problem to be solved be technical in its nature in a sense that it resides in a field not

excluded by Article 52(2) EPC.

The Board reiterates that it does not consider a technical problem to be an absolute requirement of the problem-solution approach. However, where an intrinsically non-technical solution (here: a mathematical algorithm) seeks to derive a technical character from the problem solved, the problem must be technical. Otherwise, the solution remains non-technical and does not enter into the examination for an inventive step under Article 56 EPC 1973.

A less restrictive interpretation of the inter-relationship between Article 56 EPC 1973 and Article 52(1)(2)(3) EPC would remove a legal threshold of the European Patent Convention and, thus, go beyond the competence of the Boards of Appeal.

12.   Hence, the Board sees no reason to refer any of the appellant's questions to the Enlarged Board of Appeal.

Order

For these reasons, it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

T. Buschek   S. Wibergh