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Datasheet for the decision of 15 November 2006

Case Number: T 0154/04 - 3.5.01

Application Number: 94912949.8

Publication Number: 0695445

IPC: G06F 15/21

Language of the proceedings: EN

Title of invention:
Method of estimating product distribution

Applicant:
DUNS LICENSING ASSOCIATES, L.P.

Opponent:

Headword:
Estimating sales activity / DUNS LICENSING ASSOCIATES

Relevant legal provisions:
EPC Art. 52(1), 52(2) and (3), 54, 56, 112(1)(a) and (b), 123(2)
RPBA Art. 15, 16
EPC 2000 Art. 52(1)
Vienna Convention on the Law of Treaties of 1969, Art. 31

Keyword:
"Requirement of invention -- method, main request (no)"
"Requirement of invention -- method, auxiliary request 1 (yes)"
"Inventive step -- system, main and auxiliary requests 1 to 3 (no)"
"Amendments -- claim 1, auxiliary requests 4 and 5 (inadmissible)"
"Remittal for further prosecution (refused)"
"Referral to the Enlarged Board of Appeal (refused)"

Decisions cited:
G 0005/83, G 0002/88, G 0001/95, G 0001/98, G 0003/98, G 0001/03, G 0001/04, T 0208/84, T 0022/85, T 0769/92, T 1002/92, T 0212/94, T 0953/94, T 0931/95, T 1173/97, T 0641/00, T 0619/02, T 0764/02, T 0172/03, T 0258/03, T 0531/03, T 0930/05

Judgement of the German Federal Court of Justice X ZB 20/03 - elektronischer Zahlungsverkehr of 24 May 2004

Judgement of the England and Wales Court of Appeal in re Aerotel Ltd v Telco Holdings Ltd (and others) and Macrossan’s Patent Application [2006] EWCA Civ 1371

Judgement of the England and Wales Court of Appeal in re Genentech Inc.'s Patent [1989] R.P.C. 147.

Headnote:
Headnote follows

Case Number: T 0154/04 - 3.5.01

D E C I S I O N
of the Technical Board of Appeal 3.5.01
of 15 November 2006

Appellant: DUNS LICENSING ASSOCIATES, L.P.
c/o IMS Pharminform Holding AG
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 1 September 2003 refusing European application No. 94912949.8 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: S. V. Steinbrener
Members: R. R. K. Zimmermann
G. Weiss

Summary of Facts and Submissions

I. European patent application No. 94 912 949.8 published as international publication No. WO-A-94/23382 claimed a priority date from 1993 for an invention related to the estimation of sales activities at non-reporting sales outlets.

II. The search report published with the international publication cited as relevant prior art, among others, document US-A-4 972 504 published in 1990 (cited as document D1 in the examination proceedings before the EPO).

III. The examining division refused the application for the reason that the claimed subject matter was excluded from patentability under Article 52(2)(c) and (3) EPC. The grounds of the decision given in writing were posted on 1 September 2003.

IV. The appellant (applicant) lodged an appeal against the decision, filing the notice of appeal and a debit order in respect of the appeal fee on 17 October 2003, and on 12 January 2004, the written statement setting out the grounds of appeal.

On 12 January 2004 and on 1 November 2006, the appellant filed amended sets of claims, the independent claims thereof reading as follows:

Claim 1 of the main Request filed on 12 January 2004:

"1. A method for estimating sales activity of a product at sales outlets (U1,U2) comprising:

receiving sales data for said product from a plurality of first sales outlets (S1-S5);

providing a database (205) of sales outlets, said database including geographic data and characterizing data from said first sales outlets (S1-S5) and at least one other sales outlet (U1,U2);

determining the distance d_{su} between said other sales outlet (U1,U2) and each of a selected plurality of said first sales outlets (S1-S5) using said geographic data;
formulating a weighting factor for each of said selected plurality of said first sales outlets and said other sales outlet, said weighting factor being a function of said distance and said characterizing data; and

estimating the sales of said other sales outlet (U1,U2) using said sales data for said selected first sales outlets (S1-S5) and said weighting factors."

Claim 1 of the first auxiliary request filed on 12 January 2004:

"1. A method for estimating sales activity of a product at sales outlets using a data processing system (U1,U2) comprising:

receiving sales data for said product from a plurality of first sales outlets (S1-S5);

providing a database (205) of sales outlets, said database including geographic data and characterizing

data from said first sales outlets (S1-S5) and at least one other sales outlet (U1,U2);

operating a processor to determine the distance d_{su} between said other sales outlet (U1,U2) and each of a selected plurality of said first sales outlets (S1-S5) using said geographic data;

operating said processor to formulate a weighting factor for each of said selected plurality of said first sales outlets and said other sales outlet, said weighting factor being a function of said distance and said characterizing data; and
operating said processor to estimate the sales of said other sales outlet (U1,U2) using said sales data for said selected first sales outlets (S1-S5) and said weighting factors."

Claims 7 of the main and first auxiliary request filed on 12 January 2004:

"7. A system for estimating sales activity of a product at sales outlets, comprising:

a data receiver (201) for receiving sales data from each of a plurality of first sales outlets (S1-S5);

a memory (205) storing a database of said first sales outlets (S1-S5) and at least one other sales outlet (U1,U2), said database including geographic data and characterizing data for each of said sales outlets; and a processor (215) coupled to said data receiver (201) and said memory (205) and including a program for causing said processor (215) to determine the distance

d_{su} between said other sales outlet and each of a selected plurality of said first sales outlets using said geographic data; to formulate a weighting factor for each of said selected plurality of said first sales outlets and said other sales outlet, said weighting factor being dependent on said distance and said characterizing data; and to estimate sales of said other sales outlet using said sales data from said selected sales outlets and said weighting factors."

Claim 1 of the second auxiliary request filed on 1 November 2006:

"1. A system for estimating from a central station product distribution of a product at a plurality of sales outlets, comprising;

a plurality of first sales outlets (S1-S5) each generating product distribution;

at least one other sales outlet (U1, U2) not generating product distribution;

a data receiver (201) for receiving the product distribution from each of the plurality of the first sales outlets (S1-S5) but not from the at least one other sales outlet (U1, U2);

a memory (205) storing a database including geographic data and characterizing data for the first sales outlets (S1-S5) and the at least one other sales outlet (U1,U2), and

a central processor (215) coupled to said data receiver (201) and said memory (205) and including a program for: causing said processor (215) to determine the distance d_{su} between said at least one other sales outlet and one or more selected first sales outlets using said geographic data; using said distance and said characterizing data to formulate a weighting factor for each of said one or more selected first sales outlets; and estimating product distribution of said at least one other sales outlet using said product distribution from said one or more selected first sales outlets and said weighting factors."

Claim 1 of the third auxiliary request filed on 1 November 2006:

"1. A system for estimating from a central station sales activity of a product at a plurality of sales outlets, comprising;

a plurality of first sales outlets (S1-S5) coupled to a central station;

another sales outlet (U1, U2) not coupled to the central station;

a data receiver (201) for receiving data from each of a plurality of the first sales outlets (Sl-S5);

a memory (205) storing a database of said plurality of first sales outlets (S1-S5) and the other sales outlet (U1,U2), said database including geographic data and characterizing data for each of said sales outlets; and

the central processor comprises a processor (215) coupled to said data receiver (201) and said memory (205) and including a program for causing said processor (215) to determine the distance d_{su} between said other sales outlet and each of a selected plurality of said first sales outlets using said geographic data; to formulate a weighting factor for each of said selected first sales outlets and said other sales outlet, said weighting factor being dependent on said distance and said characterizing data; and to estimate sales volume of said other sales outlet using said data from said selected first sales outlets and said weighting factors."

Claim 1 of the fourth auxiliary request filed on 1 November 2006:

"1. Apparatus for maintaining inventory based on sales activity of a product at outlets (U1,U2) comprising:
a central station (120) for receiving first data for said product from a plurality of first outlets (S1-S5);

the central station having a database (205) of outlets, said database including geographic data and characterising data from said first outlets (S1-S5) and at least one other outlet (U1,U2);

the central station for determining the distance d_{su} between said other outlet (U1, U2) and each of a selected plurality of said first outlets (S1-S5) using said geographic data;

the central station for formulating a weighting factor for each of said selected plurality of said first

outlets and said other outlet, said weighting factor being a function of said distance and said characterising data; and

wherein the central station is arranged for estimating second data for said product at said other outlet (U1, U2) using said first data for said selected first outlets (S1-S5) and said weighting factors, and to use the second data for estimating inventor [sic!] at said other outlet."

Claim 1 of the fifth auxiliary request filed on 1 November 2006:

"1. Apparatus for maintaining inventory based on sales activity of a product at outlets, comprising:
a data receiver (201) for receiving first data from each of a plurality of first outlets (S1-S5);

a memory (205) storing a database of said fist outlets (S1-S5) and at least one other outlet (U1,U2), said database including geographic data and characterising data for each of said outlets; and

a processor (215) coupled to said data receiver (201) and said memory (205) and including a program for causing said processor (215) to determine the distance d_{su} between said other outlet and each of a selected plurality of said first outlets using said geographic data; to formulate a weighting factor for each of said selected plurality of said first outlets and said other outlet, said weighting factor being dependent on said distance and said characterising data; to estimate second data for said product at said other outlet using

said first data from said selected outlets and said weighting factors, and to use the second data to estimate inventory at said other outlet."

V. Oral proceedings before the Board took place on 15 November 2006. At the oral proceedings, the appellant submitted questions for referral to the Enlarged Board of Appeal, which read as follows:
"(1) What is the correct approach to adopt in determining whether an invention relates to subject matter that is excluded under Article 52?

(2) How should those elements of a claim that relate to excluded subject matter be treated when assessing whether an invention is novel and inventive under Articles 54 and 56?

(3) And specifically:

3(a) Is an operative computer program loaded onto a medium such as a chip or hard drive of a computer excluded by Article 52(2) unless it produces a technical effect, if so what is meant by "technical effect"?

3(b) What are the key characteristics of the method of doing business exclusion?

(4) Is a system for estimating product distribution for non-reporting outlets based on weighing factors that are a function of the distance between the non-reporting outlets and sample reporting outlets and the characterization, e.g. size, of the non-reporting and reporting outlets of a technical nature?

5(a) Are the exclusions of Article 52 to be treated differently from each other in the way that obviousness is assessed?

5(b) Are inventions alleged to be within Article 52 to have a different test for obviousness than other inventions not alleged to be within Article 52?"

Questions 1, 2, 3(a), and 3(b) were explicitly taken from the questions proposed for referral to the Enlarged Board of Appeal in the "Aerotel/Macrossan" judgement of the England and Wales Court of Appeal (see the Judgement in the matters of Aerotel Ltd v Telco Holdings Ltd (and others) and Macrossan’s Patent Application [2006] EWCA Civ 1371 at paragraph No. 76).

VI. At the oral proceedings before the Board, the appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of claims 1 to 12 of the main request, or alternatively on the basis of the sets of claims in accordance with auxiliary requests 1 to 5. It was further alternatively requested to refer questions 1 to 5 to the Enlarged Board of Appeal submitted at the oral proceedings, or to remit the case back to the department of first instance for further prosecution.

VII. The appellant's submissions may be summarised as follows:

The invention provided a system and a method suitable for estimating sales or product distribution at a non-reporting sales outlet, based on sample sales data from

reporting outlets, more accurately than achieved by previous systems and methods.

Generally, the technical contribution made by an invention was the advance over that which was already known before the priority date. The criterion whether that advance was "technical" was whether it fell within or outside the exclusions as specified in Article 52(2), (3), and (4) EPC according to decision T 953/94 (not published in OJ EPO), Reasons No. 3.1. The exclusions were separate provisions and should be considered separately.

The present invention was independent of any business activity, in the sense that it could be used for the furtherance of business, but was not in itself a method of doing business. The advance was a better estimation of total sales activity, which was technical. The invention provided a better processing of data, which represented physical entities.

Providing a database for sales outlets and the step of determining distances were technical processes. The data processed were related to the sales activity of a product at sales outlets; a product was clearly a physical entity. Processing data which represented a physical entity (sales activity of a product) and which could affect the efficiency of a process (product distribution) could be said to be a further technical effect within the meaning of decision T 1173/97 - Computer program product/IBM (OJ EPO 1999, 609). Determining distances was a technical feature. The mechanism by which such distances were determined was essentially irrelevant. Even if such distances could be

derived from the ZIP code centroids available from post office data, this should not have any bearing on whether or not the subject matter was regarded as technical.

Formulating a weighting factor, and making an estimate using the sales data and the weighting factors were, by any standards, steps which clearly involved technical considerations, and thus satisfied the requirement for technical character according to decision T 769/92 - General-purpose management system/SOHEI (OJ EPO 1995, 525). The system of claim 7 was an apparatus within the meaning of decision T 931/95 - Controlling pension benefits system/PBS Partnership (OJ EPO 2001, 441) and should thus be regarded as having technical character.

The present invention provided a useful tool for operating a supply chain over a geographically dispersed region and for controlling its inventory. The fact that the new tool could be used in conjunction with commercial procedures did not detract from the fact that it was a technical tool.

The technical problem to be solved was to find a more accurate technique for estimating sales activity at a given outlet using a data-processing system to process data representing sales activity at further outlets even although sales activity was a discontinuous function of location.

Document D1, the closest prior art, only disclosed that each store had an in-store device which detected, interpreted, processed, and stored data on a real-time basis. The technical solution of the present invention

was to measure the distances between the various sales outlets, to formulate the weighting factor using that distance information for each of the plurality of sales outlets under consideration and the characteristics of the sales outlet and then to process this data to produce the desired estimate. There was no mention in the prior art, of using sales data at one store to estimate sales data at another non-reporting store on the basis of the geographic distances between the stores. The invention, therefore, was clearly novel and inventive over the prior art.

The request for referral to the Enlarged Board of Appeal was justified since the appellant expressly disagreed with the "COMVIK approach" applied by the Board for assessing inventive step in decision T 641/00 - Two identities/COMVIK (OJ EPO 2003,352) and in the Pension Benefits decision T 931/95 (*supra*). This approach introduced a legal fiction in relation to the requirement for an inventive step that was simply not intellectually honest; deeming something part of the prior art when it was not was a perverse situation. Assuming, for example, that the notional skilled person had knowledge of the mathematical method and computer program as such in decisions VICOM (T 208/84 - Computer-related invention/VICOM, OJ EPO 1987, 14) or AT&T (T 212/94, not published in OJ EPO), the remaining implementation of the invention outlined therein simply involved the conventional steps of programming a computer and running it. The applicant would be denied the protection for a new useful and technical invention.

The COMVIK approach was clearly defective because it used hindsight to determine the state of the art. The

state of the art was defined as what was truly available to the public, but the obviousness assessment in COMVIK started from a hidden, secret, position which was logically flawed. It was simply not right to say that an invention was obvious from a secret starting point.

The skilled person was the routine practitioner. He did not know things that had not been made public. This applied to non-technical disclosures or alleged disclosures just as much as to technical disclosures. The "HITACHI approach" used in HITACHI (T 258/03 - Auction method/HITACHI, OJ EPO 2004,575) and Pension Benefits (T 931/95 *supra*) was wrong in that it started an obviousness assessment by giving secret, hitherto unknown desires for the function to be achieved, to the skilled man and pretended that that desired function was known. It was not.

A clear example of why the HITACHI approach was wrong in some cases was the entire pharmaceutical industry. The discovery (prohibited from being patented) that chemical XXX cured disease YYY was the key to the development of a new drug. Once that knowledge was known, the rest of the process of developing a new drug was routine and non-inventive. Under the HITACHI approach, therefore, all pharmaceutical patents would be invalid.

The correct approach was that endorsed by the Enlarged Board of Appeal in Opinion G 1/04 - Diagnostic methods (OJ EPO 2006, 334), taking a narrow view on what was excluded, and placing emphasis on the legislature's

deliberate use of the words "as such" in the exclusions of Article 52 EPC.

The claimed invention should be treated as a whole when assessing patentability, as the combination could be technical even if features taken individually had to be considered non-technical. The COMVIK approach was in conflict with this statement since it considered a claim piecemeal, with the secret, non-technical features being extracted from the claim and given to the notional skilled man.

VIII. The Board announced the decision on the appeal at the end of the oral proceedings.

Reasons for the Decision

1. The appeal, although admissible, is not allowable.

The invention claimed according to the main request and auxiliary requests 1 to 3 does not meet the requirements of patentability and the claims of auxiliary requests 4 and 5 include inadmissible amendments for the reasons given below.

The auxiliary request for remitting the case back to the department of first instance for further prosecution is to be refused since it would be to no purpose to order further examination on the basis of claims which are not allowable on the merits.
The further auxiliary request for a decision of the Enlarged Board of Appeal under Article 112(1)(a) EPC is refused. Since the reasons for this are relevant to

deciding on the preceding appeal requests, the request for referral will be considered first.

Referral to the Enlarged Board of Appeal

2. According to Article 112(1)(a) EPC, a referral of questions to the Enlarged Board of Appeal is only admissible if a decision is required in order to ensure uniform application of the law or if an important point of law arises. The answer to the referred question should not be merely of theoretical or general interest, but has to be essential to reach a decision on the appeal in question (see, for example, G 3/98 - Sixth-month period/University Patents (OJ EPO 2001, 62), Reasons No. 1.2.3).

Under Article 16 RPBA, a question will be referred to the Enlarged Board of Appeal if the referring board considers it necessary to deviate from an interpretation or explanation of the Convention contained in an earlier opinion or decision of the Enlarged Board of Appeal.

A decision deviating from an opinion given in another decision of a board of appeal, a diverging opinion expressed in decisions of different boards, or a deviation from some national jurisprudence -- for example, from the UK case law of the Court of Appeal to which the appellant referred in support of its case -- are not *per se* valid reasons for referral (see also Article 15 RBPA). Hence, the legal system of the European Patent Convention gives room for evolution of the jurisprudence (which is thus not "case law" in the strict Anglo-Saxon meaning of the term) and leaves it

to the discretion of the boards whether to give reasons in any decision deviating from other decisions or to refer a point of law to the Enlarged Board. The President of the European Patent Office may intervene under Article 112(1)(b) EPC, in particular if the legal situation becomes unclear for first instance proceedings.

3. In the interest of the harmonisation of national and international rules of law, the boards of appeal will take into consideration decisions and opinions given by national courts in interpreting the law (see G 5/83 - Second medical indication/EISAI (OJ EPO 1985, 64), Reasons No. 6). Nevertheless, in the proceedings before the European Patent Office, such considerations do not exonerate a board of appeal from its duty as an independent judicial body to interpret and apply the European Patent Convention and to decide in last instance in patent granting matters. In addition, despite harmonised legal regulations it is not self-evident that their interpretation is also harmonised among different national courts, let alone courts of different contracting states, so that the boards of appeal would be at a loss as to which interpretation to follow if they did not exercise their own independent judgement.

4. In the light of the above criteria, the request for referral must be refused:

Question 3(a) concerns the patentability of computer programs loaded onto a medium, which is not the subject matter of any one of the claims requested. Hence, although possibly of general interest, this question is

plainly irrelevant in deciding the present appeal on its merits.

Question 4 relates to a very specific subject matter, namely the patentability of a system for estimating product distribution for non-reporting outlets. This issue neither addresses an important point of law nor requires any answer from the Enlarged Board of Appeal to ensure the uniform application of law.

Questions 1, 2, 3(b), and 5(a) and (b), although concerning important points of law relevant to the present appeal, do not warrant a referral to the Enlarged Board of Appeal either since the Board has no doubts how to answer the questions on the basis of the Convention, following the established case law on patentability of inventions.

Case law related to patentability of inventions

5. Considering questions 1, 2, 3(b), and 5(a) and (b) in more detail, the issue raised boils down to the application of Articles 52, 54, and 56 EPC in the context of subject matter and activities excluded from patentability under Article 52(2) EPC.

The constant jurisprudence of the boards of appeal as far as it is relevant to the present case may be summarised succinctly in the following principles:

(A) Article 52(1) EPC sets out four requirements to be fulfilled by a patentable invention: there must be an invention, and if there is an invention, it must

satisfy the requirements of novelty, inventive step, and industrial applicability.

(B) Having technical character is an implicit requisite of an "invention" within the meaning of Article 52(1) EPC (requirement of "technicality").

(C) Article 52(2) EPC does not exclude from patentability any subject matter or activity having technical character, even if it is related to the items listed in this provision since these items are only excluded "as such" (Article 52(3) EPC).

(D) The four requirements invention, novelty, inventive step, and susceptibility of industrial application are essentially separate and independent criteria of patentability, which may give rise to concurrent objections. Novelty, in particular, is not a requisite of an invention within the meaning of Article 52(1) EPC, but a separate requirement of patentability.

(E) For examining patentability of an invention in respect of a claim, the claim must be construed to determine the technical features of the invention, i.e. the features which contribute to the technical character of the invention.

(F) It is legitimate to have a mix of technical and "non-technical" features appearing in a claim, in which the non-technical features may even form a dominating part of the claimed subject matter. Novelty and inventive step, however, can be based only on technical features, which thus have to be

clearly defined in the claim. Non-technical features, to the extent that they do not interact with the technical subject matter of the claim for solving a technical problem, i.e. non-technical features "as such", do not provide a technical contribution to the prior art and are thus ignored in assessing novelty and inventive step.

(G) For the purpose of the problem-and-solution approach, the problem must be a technical problem which the skilled person in the particular technical field might be asked to solve at the relevant priority date. The technical problem may be formulated using an aim to be achieved in a non-technical field, and which is thus not part of the technical contribution provided by the invention to the prior art. This may be done in particular to define a constraint that has to be met (even if the aim stems from an *a posteriori* knowledge of the invention).

6. These principles have indeed a clear and consistent basis in the Convention and in the case law of the boards of appeal and the Enlarged Board of Appeal, in particular.

The fundamental provision of the EPC which governs the patentability of inventions is Article 52(1) EPC, which reads:

> "European patents shall be granted for any inventions which are susceptible of industrial application, which are new and which involve an inventive step."

The wording of the amended provision in the revised Convention EPC 2000 is:

> "European patents shall be granted for any inventions, in all fields of technology, provided that they are new, involve an inventive step and are susceptible of industrial application."

Article 52(1) EPC expresses the fundamental maxim of the general entitlement to patent protection for any inventions in all technical fields (see G 5/83 (*supra*), Reasons No. 21; G 1/98 - Transgenic plant/NOVARTIS II (OJ EPO 2000, 111), Reasons No. 3.9; G 1/03 - Disclaimer/PPG (OJ EPO 2004, 413), Reasons No. 2.2.2, G 1/04 (*supra*), Reasons No. 6). Any limitation to the general entitlement to patent protection is thus not a matter of judicial discretion, but must have a clear legal basis in the European Patent Convention.

The application of Article 52(1) EPC presents a problem of construction as there was no legal or commonly accepted definition of the term "invention" at the time of conclusion of the Convention in 1973. Moreover, the EPO has not developed any such explicit definition ever since, for good reasons. The second paragraph of Article 52 EPC is merely a negative, non-exhaustive list of what should not be regarded as an invention within the meaning of Article 52(1) EPC. It was the clear intention of the contracting states that this list of "excluded" subject matter should not be given a too broad scope of application, as follows from the legislative history of Article 52 (2) EPC, then

Article 50, amended on initiative of the German delegation with the reasoning:

> "This could lead to the erroneous conclusion that a broad interpretation should be given to items not limited in this way in paragraph 2."

(see the Historical Documentation (Travaux préparatoires) relating to the European Patent Convention, Munich 1999, document M/11 of March 1973, Vol. 35E, No. 21 and document M/PR/I, Vol. 42E, No. 42).

Paragraph 3 of the present Article 52 EPC was introduced as a bar to such a broad interpretation of Article 52(2) EPC. By referring explicitly to the "patentability of the subject-matter or activities", paragraph 3 actually enshrined the entitlement to patent protection for the non-inventions enumerated in paragraph 2 -- albeit restricting the entitlement by excluding patentability "to the extent to which the European patent application or European patent relates to such subject matter or activities as such".

7. The intention of Article 52(3) EPC was clearly to ensure that anything which was a patentable invention before under conventional patentability criteria should remain patentable under the European Patent Convention. That no paradigm shift was intended may also be seen from the fact that e.g. Switzerland as a contracting state has considered it unnecessary ("überflüssig") to include the contents of Article 52(2) and (3) EPC in the national regulations when harmonising them with the EPC (see "Botschaft des Bundesrates an die Bundesversammlung über drei Patentübereinkommen und die

Änderung des Patentgesetzes", 76.021, 24 March 1976, page 67).

As expressed in the VICOM decision T 208/84 (*supra*), Reasons No. 16, "decisive [for the invention to be patentable] is what technical contribution the invention as defined in the claim when considered as a whole makes to the known art". This principle is referring to the patentable invention, i.e. an invention meeting all the patentability criteria of the Convention. VICOM thus does not postulate that the technical contribution to the prior art is the actual criterion to be applied for deciding on the requirement of invention.

Taking into account object and purpose of the patentability requirements and the legal practice in the contracting states of the EPO, the boards of appeal considered the technical character of the invention to be the general criterion embodied in paragraphs 2 and 3 of Article 52 EPC (see, for example, decisions T 22/85 - Document abstracting and retrieving/IBM (OJ EPO 1990, 12), Reasons No. 3, Pension Benefits T 931/95 (*supra*), Reasons No. 2, and more recently decisions T 619/02 - Odour selection/QUEST INTERNATIONAL (OJ EPO 2007, 63), Reasons No. 2.2 and T 930/05 - Modellieren eines Prozessnetzwerkes/XPERT (not published in OJ EPO), Reasons No. 2). By having technical character, any product, method etc., even if formally relating to the list enumerated in paragraph 2, is not excluded from patentability under paragraphs 2 and 3 of Article 52 EPC.

8. It was indeed always common ground that creations in engineering and technology were entitled to patent protection under the European Patent Convention. As the Board judged in T 930/05 (*supra*), Reasons No. 2, this criterion is reflected by the internal logic of Article 52(1) and (2) EPC. The mere fact that the Article 52(2) list of items not to be regarded as inventions is non-exhaustive ("in particular") is indicative of the existence of an exclusion criterion common to all those items and allowing for additions to the list that were thought possible. The enumeration of typical non-inventions in Article 52(2) EPC covers subjects whose common feature is a substantial lack of technical character. The formulation of the law ultimately derives from the classical notion of invention adopted, which distinguishes between practical scientific applications and intellectual achievements in general. The connection of the notions of invention and technical character of the invention arises immediately, because the list of exclusions in Article 52(2) EPC, with its reference to Article 52(1) EPC, must be viewed as a negative definition of the notion of invention. This connection is also inherent in other provisions of the EPC, such as Articles 18 and 56 and Rules 27(1) and 29(1) EPC, which clearly express this underlying principle of patent law.

The technical character as a legal requirement of invention was expressly confirmed by the Conference of the Contracting States to Revise the European Patent Convention of 20 to 29 November 2000. Revised Article 52(1) EPC was approved by the contracting states on the basis of the Basic Proposal for the Revision of the European Patent Convention,

document MR/2/00, which is hence -- as part of a subsequent agreement between the contracting states concerning the EPC -- a valid instrument for construing the Convention according to the traditional rules of interpretation (see decision G 5/83 (*supra*), Reasons No. 5, rule (4), and the corresponding Article 31 of the Vienna Convention on the Law of Treaties of 1969).

The Basic Proposal clearly confirms that patent protection should be available to technical inventions of all kinds (MR/2/00e, page 43, No. 1) and that the technical character is a mandatory requirement for any patentable invention. Paragraph No. 4 is very explicit on this point; it says:

> "4. Nevertheless, the point must be made that patent protection is reserved for creations in the technical field. This is now clearly expressed in the new wording of Article 52(1) EPC. In order to be patentable, the subject-matter claimed must therefore have a "technical character" or to be more precise - involve a "technical teaching", ie an instruction addressed to a skilled person as to how to solve a particular technical problem using particular technical means. It is on this understanding of the term "invention" that the patent granting practice of the EPO and the jurisprudence of the Boards of Appeal are based. The same considerations apply to the assessment of computer programs.
>
> Thus, it will remain incumbent on Office practice and case law to determine whether subject-matter claimed as an invention has a technical character

> and to further develop the concept of invention in an appropriate manner, in light of technical developments and the state of knowledge at the time."

9. The presence of technical character in an invention (as well as for the industrial applicability) is an absolute requirement that does not imply any new contribution to the prior art. Naturally, however, a patentable invention, i.e. an invention meeting all criteria of patentability, must provide a novel and inventive technical contribution to the prior art.

From the wording of Article 52(1) EPC and the use of the term "invention" in the context of the patentability criteria, it is clear that the requirements of invention, novelty, inventive step, and susceptibility of industrial application are separate and independent criteria, which may give rise to concurrent objections under any of these requirements.

This construction of Article 52(1) EPC has a clear basis in the case law of the Enlarged Board of Appeal. Invoking the example of a discovery having no novel technical features, the Enlarged Board of Appeal stated in G 2/88 - Friction reducing additive/Mobile Oil III (OJ EPO 1990,93), Reasons Nos. 7.2, 7.3, and 8:

> "7.2 [...] the claim contains no novel technical feature and is invalid under Article 54 (1) and (2) EPC (because the only technical features in the claim are known).

> 7.3 In relation to such a claim having no novel technical feature, there is of course no need to consider whether the claimed invention is in respect of a discovery [...] or is otherwise excluded from patentability by virtue of Article 52(2) EPC.
>
> 8. [...] In a particular case, it is possible that there may be concurrent objections under Article 54 (1) and (2) EPC and under Article 52 (2) and (3) EPC. They are distinct objections, however."

In decision G 1/95 - Fresh Grounds for Opposition/DE LA RUE (OJ EPO 1996, 615), Reasons Nos. 4 ff., it is said:

> "4.3 [...], Article 100(a) EPC simply refers, apart from the general definition of patentable inventions according to Article 52(1) EPC, and the exceptions to patentability according to Article 53 EPC, to a number of definitions according to Articles 52(2) to (4) and 54 to 57 EPC, which specify "invention", "novelty", "inventive step" and "industrial application" which, when used together with Article 52(1) EPC, define specific requirements and therefore form separate grounds for opposition in the sense of separate legal objections or bases for opposition."

In decision T 1002/92 - Queueing system/PETTERSSON (OJ EPO 1995, 605), the appellant argued that the claimed subject-matter did not involve any contribution to the art in a field not excluded from patentability since

the only claim feature not disclosed in the prior art was not a technical feature, giving rise to the following consideration (Reasons No. 1):

> "In the board's view, these submissions result from a misinterpretation of the relationship between Articles 52 and 56 EPC. In a case such as the present, a first question to be considered is whether the appellant is correct in his contention that the subject-matter of claim 1 does not constitute an "invention" within the meaning of Article 52(1) EPC. If, contrary to the appellant's contention, such subject- matter is not excluded from being patentable under Article 52 EPC, a further and separate question, also raised by the appellant, is whether the claimed subject-matter involves an inventive step."

10. The examination whether there is an invention within the meaning of Article 52(1) to (3) EPC should hence be strictly separated from and not mixed up with the other three patentability requirements referred to in Article 52(1) EPC. This distinction abstracts the concept of "invention" as a general and absolute requirement of patentability from the relative criteria novelty and inventive step, which in an ordinary popular sense are understood to be the attributes of any invention, as well as from the requirement of industrial applicability. Decisive for the presence of a (potentially patentable) invention is the inherent character of the claimed subject-matter.

11. The distinction between the absolute requirement of invention and the relative requirements of novelty and

inventive step is not unknown in the national jurisprudence. For example, Lord Justice Mustill of the England and Wales Court of Appeal observed in the judgement in re Genentech Inc.'s Patent [1989] R.P.C. 147, pages 262 f.:

> "This suggestion of a need to identify the invention leads me to a part of the case which I have found most perplexing. Most of the arguments have been concentrated on the three conditions precedent to the grant of a patent set out in paragraphs (a) to (c) of section 1(1) -- and understandably so, given the shape of the old law. But this approach tends to mask a more fundamental requirement which must be satisfied before a patent can be properly be granted, namely that the applicant has made an "invention". [...]
>
> [...] To my mind this shows that the question whether the claim discloses anything which can be described as an invention must be answered in the affirmative before compliance with paragraphs (a) to (d) becomes relevant: and the wording of Article 52 in all three languages is even more plainly to the same effect. [...]
>
> [...] It might, at first sight, seem that this adds a wholly unnecessary complication, where paragraphs (a) to (c) do all that is necessary to define the permissible subject matter of the monopoly, and that it is absurd to speak of an invention which does not involve an inventive step --- as one must be ready to do, if the interpretation just suggested is sound [...].

> Thus, although the objection to a patent on the ground that it monopolises something which is not an invention will very often overlap another potential objection --- and such an element of overlapping is nothing new in patent law --- it is none the less a separate element which, in the appropriate case, ought to be separately investigated."

The German Federal Court of Justice (Supreme Court) has adopted a similar broad concept of "invention"; for example in decision X ZB 20/03 - Elektronischer Zahlungsverkehr [Electronic banking] of 24 May 2004 (see Reasons Nos. II 3. b) (1) and II 4.), it stated that:

> "(1) [...] The degree to which [the subject-matter] is known, however, is an aspect relating to the patenting requirements of novelty and inventive step, not to the question of exclusion from patentability (Sections 3 and 4 German Patent Law). As the Senate has already stated in connection with the requirement of having a technical nature (BGHZ 143, 255, 263 - Logic verification), even in the case of computer-related teachings or those using data processing, the results of the evaluation as to whether a concrete technical problem exists and has been solved or whether, in the absence thereof, a legal exclusion from patentability applies under Section 1 paragraph 2 No. 3 and paragraph 3 German Patent Law cannot depend on whether the proposal to be assessed is new and inventive."

"4. The German Federal Patent Court will therefore have to subject the application to a further substantive examination, whereby the examination as to the legal patenting requirements and exclusions from patentability does not have to be performed in any particular order. [...]"

(Translation from:

"(1) [...] Dessen Bekanntheit hingegen ist ein Gesichtspunkt, den nicht die Frage eines Patentierungsausschlusses, sondern die nach den Patentierungsvoraussetzungen der Neuheit und der erfinderischen Tätigkeit (§§ 3, 4 PatG) berührt. Wie der Senat bereits hinsichtlich des Erfordernisses der Technizität ausgeführt hat (BGHZ 143, 255, 263 - Logikverifikation), darf auch bei computerbezogenen oder Datenverarbeitung nutzenden Lehren die Wertung, ob ein konkretes technisches Problem besteht und gelöst wird oder ob mangels eines solchen ein gesetzlicher Patentierungsausschluss nach § 1 Abs. 2 Nr. 3, Abs. 3 PatG greift, im Ergebnis nicht davon abhängen, ob der zu beurteilende Vorschlag neu und erfinderisch ist."

"4. Das Bundespatentgericht wird deshalb die Anmeldung einer erneuten sachlichen Prüfung unterziehen müssen, wobei hinsichtlich der gesetzlichen Patentierungsvoraussetzungen und Patentierungsausschlüsse keine bestimmte Prüfungsreihenfolge eingehalten werden muss. [...]")

12. These views are entirely consistent with the legal concept of "invention" applied by the Board in the context of Article 52(1) to (3) EPC, which should not be mixed up with the layman's ordinary understanding of invention as a novel, and often also inventive contribution to the known art. Using these two very different concepts of invention in one breath would be a legal fallacy.

The "technical effect approach" endorsed by Lord Justice Jacob in the Aerotel/Macrossan judgement (see paragraphs Nos. 26(2) and 38) seems to be rooted in this second ordinary meaning of the term invention, a practice which might be understandable "given the shape of the old law" (Lord Justice Mustill, loc.cit.), but which is not consistent with a good-faith interpretation of the European Patent Convention in accordance with Article 31 of the Vienna Convention on the Law of Treaties of 1969.

Actually, any reference to the prior art in the context of Article 52(2) and (3) EPC would lead to insurmountable difficulties; the prior art, the "state of the art" in the terminology of the Convention, is a complex concept finely tuned by a combination of provisions, Articles 54 to 56 EPC, and depending on the filing and priority dates of the application or patent as well as on the patentability requirement involved. There is, however, no rule whatsoever defining the prior art which should be applied in the context of Article 52(2) EPC. It is simply inconceivable that the contracting states missed such an important point in the conclusion of the Convention. Hence, there are

convincing reasons why the "contribution" or "technical effect" approach should be abandoned, which the boards did some ten years ago.

13. The "technical effect approach (with the rider)" applied in the Aerotel/Macrossan judgement is irreconcilable with the European Patent Convention also for the further reason that it presupposes that "novel and inventive purely excluded matter does not count as a 'technical contribution'" (Aerotel/Macrossan, e.g. paragraph No. 26(2)). This has no basis in the Convention and contravenes conventional patentability criteria; referring e.g. to mathematical methods and to discoveries, the Enlarged Board of Appeal said in decision G 2/88 (*supra*), Reasons No. 8:

> "[...], as was recognised in Decision T 208/84 [...] (dealing there with a mathematical method rather than a discovery, but the same principle applies), the fact that the idea or concept underlying the claimed subject-matter resides in a discovery does not necessarily mean that the claimed subject-matter is a discovery 'as such'".

In fact, a non-technical feature may interact with technical elements so as to produce a technical effect, e.g. by its application for the technical solution of a technical problem (see for example Opinion G 1/04 (*supra*), Reasons Nos. 5.2 ff.). If this is true for some purely excluded matter, for example the intellectual exercise cited in the Opinion, then -- to the extent it contributes to the technical effect -- it must count as a contribution to the technical character.

14. Whereas novelty is not necessary to establish the technical character of an invention, the converse is not true as novelty and inventive step can only be established on the basis of the technical features of the invention. This is in line with the case law of the boards of appeal; for example, the Enlarged Board of Appeal said in decision G 2/88 (*supra*), Reasons No. 7:

> "7. [...], the claims of a European patent should clearly define the technical features of the subject invention and thus its technical subject-matter, in order that the protection conferred by the patent can be determined and a comparison can be made with the state of the art to ensure that the claimed invention is inter alia novel. A claimed invention lacks novelty unless it includes at least one essential technical feature which distinguishes it from the state of the art.
>
> When deciding upon the novelty of a claim, a basic initial consideration is therefore to construe the claim in order to determine its technical features."

> "7.2 [...] if on its proper construction the claim contains no technical feature which reflects such new use, and the wording of the claim which refers to such new use is merely mental in nature and does not define a technical feature, then the claim contains no novel technical feature and is invalid under Article 54(1) and (2) EPC (because the only technical features in the claim are known)."

15. From this distinction between the technical features and non-technical features ("merely mental in nature" in the citation above), it must be inferred that non-technical features to the extent that they do not interact with technical features to produce a technical effect cannot establish novelty or inventive step (see also the decisions cited in "Case Law of the Boards of Appeal of the European Patent Office", fifth edition, December 2006, European Patent Office 2006, chapter I.D.8.4). The Aerotel/Macrossan judgement at paragraph No. 27 makes the comment that to "deem the new music or story part of the prior art (the device of Pension Benefits and Hitachi) is simply not intellectually honest". However, this misses the point of the approach used by the Board to determine the technical features in a claim if technical and non-technical aspects are tightly intermingled in a mixed type claim, as it is typically the case with computer-implemented inventions (see, for example, decisions T 172/03 - Order management/RICOH (not published in OJ EPO), Reasons Nos. 4 ff. and T 619/02 (*supra*), Reasons No. 4.2).

16. For the purpose of the problem-and-solution approach developed as a test for whether an invention meets the requirement of inventive step, the problem must be a technical problem (see the COMVIK decision T 641/00 (*supra*), Reasons Nos. 5 ff.). The definition of the technical problem, however, is difficult if the actual novel and creative concept making up the core of the claimed invention resides in the realm outside any technological field as it is frequently the case with computer implemented inventions. Defining the problem without referring to this non-technical part of the invention, if at all possible, will generally result

either in an unintelligible vestigial definition, or in an contrived statement that does not adequately reflect the real technical contribution provided to the prior art.

The Board, therefore, allowed in COMVIK an aim to be achieved in a non-technical field to appear in the formulation of the problem as part of the framework of the technical problem that is to be solved, in particular as a constraint that is to be met (Reasons No. 7). Such a formulation has the additional, desirable effect that the non-technical aspects of the claimed invention, which generally relate to non-patentable desiderata, ideas, and concepts and belong to the phase preceding any invention, are automatically cut out of the assessment of inventive step and cannot be mistaken for technical features positively contributing to inventive step. Since only technical features and aspects of the claimed invention should be taken into account in assessing inventive step, i.e. the innovation must be on the technical side, not in a non-patentable field (see also decisions T 531/03 - Discount certificates/CATALINA (not published in OJ EPO) Reasons Nos. 2 ff., and T 619/02 (*supra*), Reasons No. 4.2.2), it is irrelevant whether such a non-technical aim was known before the priority date of the application, or not.

This approach, although not made explicit before the COMVIK decision T 641/00, is in line with the case law of the boards of appeal as shown for example from the analysis of some earlier decisions in decision T 764/02 - Banking Services/ONLINE RESOURCES (not published in OJ EPO), Reasons No. 11.

17. In summary, the practice and case law of the Board referred to in the questions 1, 2, 3(b), and 5(a) and (b) have a sound legal basis in the Convention and are consistent with the case law of the boards of appeal and the Enlarged Board of Appeal. To decide on the present appeal, an answer of the Enlarged Board of Appeal to any of these questions is thus not required, and hence the request of referring these questions must be refused.

Patentability: Requirement of invention

Main request

18. Claim 1 of the main request defines a method for estimating sales activity of a product at a (non-reporting) sales outlet. The estimated sales activity is calculated essentially by correlating sales activities at reporting sales outlets according to the respective distance between the non-reporting sales outlet and the respective reporting sales outlet (see claim 1 and the WO-publication, page 4, lines 33 ff. and page 8, lines 3 to 36, for example). Such a method is not an invention within the meaning of Article 52(1) to (3) EPC.

19. Creating information about sales activities or other types of business data using mathematical and statistical methods to evaluate data gathered from the respective business environment is a business research activity, which like other research methods does not serve to solve a technical problem relevant to any

technical field. The Board judges that in analogy to schemes, rules, and methods of doing business, methods of business research are excluded "as such" from patentability under Article 52(2)(c) and (3) EPC.

20. Interacting with and exploiting information about the physical word belongs to the very nature of any business-related activity. Accepting such features as sufficient for establishing patentability would render the exclusion of business methods under Article 52(2)(c) EPC meaningless. Therefore, the Board judges that gathering and evaluating data as part of a business research method, even if the data relates to physical parameters or geographic information as in the present case, do not convey technical character to a business research method if such steps do not contribute to the technical solution of a technical problem.

21. Determining sales data and geographical distances between outlets and using this data to estimate sales at specific outlets by means of the statistical method claimed and disclosed in the application do not solve any technical problem in a technical field. The definitions in claim 1 do not imply the use of any technical system or means. The term "database", in particular, may be construed to designate any collection of data so that claim 1 encompasses methods which may be performed without using any technical means at all.

The method of claim 1 is hence excluded from patentability under Article 52(1), (2)(c) and (3) EPC.

Auxiliary request 1

22. Auxiliary request 1 explicitly claims technical means (processor) to perform individual steps of the method. From the HITACHI decision T 258/03 (*supra*), Reasons Nos. 4.1 to 4.7, it follows that the claimed method is an invention in terms of Article 52(1) EPC.

Requirement of inventive step

23. For assessing inventive step, the system claims 7 of the main request and auxiliary request 1, and the system claims 1 of auxiliary requests 2 and 3 may be considered together since the technical subject matter of these claims is only marginally different.

24. The claimed system essentially consists of a central station connected to a plurality of first (reporting) sales outlets providing sales data to the central station for estimating sales (product distribution, sales volume) of at least one other (non-reporting) sales outlet. Regarding such a system, there is general consent that document D1 is a relevant piece of prior art and an appropriate starting point for assessing inventive step.

25. In the terminology of the present application, document D1 discloses a system comprising a plurality of first sales outlets (figure 1: store 1,..., store N) which generate sales data/volume/distribution (identification of the retail store, date of transaction, universal product code UPC, quantity

purchased etc. enabling a 'market basket' analysis, see column 7, lines 19 to 45).

This prior art system further comprises a central station ("central site 24", see figures 1 and 7) receiving these sales data via a data receiver ("telephone 102") from each of the first sales outlets (see column 11, lines 14 to 23, and column 16, lines 19 to 35). A memory stores a database including data for each of the sales outlets ("very large direct access storage device DASD 112", see in particular column 16, lines 40 to 45). This database stores data required for market analysis, for example characteristic data and geographic data (see column 7, lines 21 f. and column 19, lines 66 ff.).

A central processor/processor ("central processor 110", "central processor 114", see figure 7 and column 16, lines 49 to 55) processes the data, for example by "perform[ing] statistical calculations necessary in producing output reports for customers of the market research system".

26. The claimed system according to the present requests is distinguished therefrom by the following features:

- There is at least one other sales outlet not generating sales data/product distribution and/or not coupled to the central station.

- The system provides a different market analysis; the sales, geographic, and other characteristic data are processed to estimate sales/product distribution/sales volume at the at least one other sales outlet on the basis of a method and

algorithm specifically disclosed in the present application.

27. The contribution to the prior art is the use of the known system for performing a new market analysis different from the statistical calculations disclosed in document D1 and hence requiring the implementation of a new algorithm for processing the sales data and creating the desired information about the non-reporting sales outlets. This, however, does not imply the use of any new technical means. The contribution to the prior art is therefore limited to the implementation of the new algorithm.

28. For the reasons given above, this new algorithm and the method of estimating sales activity at a non-reporting outlet are part of a business research method and do not contribute to the solution of any technical problem. They have thus to be ignored in assessing inventive step. The only technical aspect of the claimed system, namely to use a processor to implement the non-technical method and the corresponding algorithm, is an obvious consequence of using computer systems for market analysis like in document D1. Hence, the main request and the auxiliary requests 1 to 3 are not allowable for lack of inventive step (Article 56 EPC).

Inadmissible amendments (auxiliary requests 4 and 5)

29. Claims 1 of auxiliary requests 4 and 5 are directed to an "apparatus for maintaining inventory based on sales activity of a product at outlets". The application as originally filed, however, does not disclose the maintenance of inventory as an object of the invention.

The whole application is directed to estimating sales activities at at least one non-reporting outlet (see for example the summary of the invention at pages 4 to 10 and the claims as originally filed). The very short reference to "maintain proper inventory" on page 1 refers only to the background of the invention, not to the actual invention disclosed in the application. There is no link derivable from the application documents which could lead the skilled reader from the estimation of sales data at a non-reporting outlet to the idea of maintaining inventory, let alone how any estimated data would enter into such maintenance.

The appellant argued that such an idea would be obvious to the skilled reader from the original disclosure. However, this does not meet the standard to be applied under Article 123(2) EPC, namely that amendments must be derivable from the original disclosure in a direct and unambiguous manner. Claims 1 of auxiliary requests 4 and 5 are thus not admissible under Article 123(2) EPC.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

T. Buschek S. V. Steinbrener

Case Number: T 0154/04 - 3.5.01

D E C I S I O N
of 1 October 2007
correcting errors in the decision of the appeal case T 0154/04 - 3.5.01
of the Technical Board of Appeal 3.5.01
of 15 November 2006

Appellant: DUNS LICENSING ASSOCIATES, L.P.
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 1 September 2003 refusing European application No. 94912949.8 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: S. V. Steinbrener
Members: R. R. K. Zimmermann
G. Weiss

In application of Rule 89 EPC the decision given in case T 0154/04 on 15 November 2006 is hereby corrected as follows:

Page 37, line 6: "word" is replaced by "world".

The Registrar: The Chairman:

T. Buschek S. V. Steinbrener