

## **C. Novelty**

An invention can be patented only if it is new. An invention shall be considered to be new if it does not form part of the state of the art. The purpose of Art. 54(1) EPC is to prevent the state of the art being patented again (T 12/81, OJ 1982, 296; T 198/84, OJ 1985, 209).

The first step in deciding whether an invention is new is to define the prior art, the relevant part of that art, and the content of that relevant art. The next is to compare the invention with the prior art thus defined, and see whether the invention differs from it. If it does, the invention is novel.

### **1. Defining the state of the art**

Under Art. 54(2) EPC, the state of the art comprises everything made available to the public by means of a written or oral description, by use, or in any other way, **before** the filing or priority date of the European patent application.

#### **1.1 Relevant point in time**

An application with the same filing or priority date as the application to be examined is not part of the state of the art (see T 123/82).

According to the boards' established case law, the prior art's content is to be interpreted in the manner in which it would have been understood by the skilled person at the time it was made available. In particular, for ascertaining the disclosure of a document forming part of the state of the art within the meaning of Art. 54(2) EPC, the relevant date is that of publication. Interpreting a document using knowledge which only became available to the relevant experts between the publication date of the cited prior art and the filing or priority date of the application to be examined or the patent in dispute is an inventive-step issue, not a novelty one (see T 205/91, T 965/92, T 590/94). In T 74/90 the board did however consider how a skilled person would have understood a citation on the filing date of the patent in suit. It concluded that this disclosure did not comprise a possible interpretation which, because of technical prejudice, such a person would have considered unperformable on the filing date.

#### **1.2 European prior rights**

Under Art. 54(3) and (4) EPC the state of the art comprises the content of other European applications filed earlier than, but published under Art. 93 on or after the date of filing of the application being examined, to the extent that the earlier and later applications validly (R. 23a) EPC designate the same state or states.

In J 5/81 (OJ 1982, 155) the board held that a published European patent application became part of the state of the art under Art. 54(3) EPC, with retroactive effect as from its filing date or priority date, for assessing applications filed after that filing date or priority date but prior to its publication, but that this should only apply if such a "prior application" was still in existence at the time of publication.

In **T 447/92** the whole contents of an earlier document within the meaning of Art. 54(3) and (4) EPC had to be considered as forming part of the state of the art as far as novelty was concerned. The board pointed out that the boards of appeal had consistently applied a very restrictive interpretation of disclosure in order to reduce the risk of self-collision. To do otherwise would, in the board's view, undesirably undermine the exclusion from consideration of documents within the meaning of Art. 54 EPC when deciding whether there had been an inventive step under Art. 56 EPC, second sentence.

### **1.3 PCT applications as state of the art**

An international application not yet published and for which the EPO is a designated Office is considered as comprised in the state of the art in accordance with Art. 54(3) EPC ie with effect from its filing or priority date, as soon as it has been filed at the EPO in an official language and the national fee has been paid (Art. 158(2) and (3) EPC).

In **T 404/93** the European patent application was limited to the contracting states IT, NL and SE in view of an earlier international application, published after the filing date of the former. The board noted that the earlier PCT application had mentioned several EPC contracting states, including IT, NL and SE, as being designated for a European patent. However, when the earlier application had entered the European phase, no designation fees had been paid for IT, NL and SE. Accordingly, the board found that the earlier international application was not comprised in the state of the art under Art. 54(3) EPC for IT, NL and SE (see also **T 623/93**).

In **T 622/91** the respondent (patent proprietor) requested that the decision under appeal be set aside and the patent maintained for all designated contracting states. Two earlier international applications and the European patent had designated the contracting state FR. The board noted that the requirements of Art. 158(2) EPC were fulfilled, and considered the international applications as comprised in the state of the art relevant to the patent in suit in accordance with Art. 54(3) EPC and Art. 158(1) EPC. The board went on to examine claim 1 of the main request and found that the earlier application was novelty-destroying in so far as the same contracting state FR was designated.

### **1.4 Excluded national prior rights**

In **T 550/88** (OJ 1992, 117) (see p. 473) the board made it clear that, on the proper interpretation of Art. 54(3) EPC, prior national rights were not comprised in the state of the art. As to the references to Part VIII of the EPC made by the appellants, the board found that they rather confirmed that the effect of a prior national right upon a European patent was a matter purely for national law, whereas the effect of a prior European application upon a European patent was specifically provided for in Art. 54(3) EPC (which might also be a ground for revocation under national laws by virtue of Art. 138(1)(a) EPC). In other words, the combined effect of Art. 138(1) EPC and Art. 139 EPC was to provide an additional possible ground for revocation under national laws based upon the existence of a prior national right, which was not available under Art. 54 EPC.

In the board's view, it was clear that the wording of Art. 54(3) EPC was intended deliberately

to exclude national applications from having the prior art effect therein stated in respect of a European patent. At the time the EPC had entered into force it had still been uncertain whether the national laws of contracting states would include the same prior right effect as set out in Art. 54(3) EPC. Even now, the national law in Switzerland provided for a different prior right effect ("prior claim") from that set out in Art. 54(3) EPC ("whole contents"). The omission of prior national rights from Art. 54(3) EPC had been made in the context of such international uncertainty. The board went on to note that if Art. 54(3) EPC were to include prior national rights, the result would be a legal inconsistency particularly so far as Switzerland was concerned, having regard to Art. 139(2) EPC: in an opposition to a European patent before the EPO in which a national prior right was relied upon under Art. 54(3) EPC, the conflict would be resolved in accordance with the "whole contents" system of Art. 54(3) EPC, whereas in revocation proceedings under national law in Switzerland in respect of the European patent the same conflict would be resolved pursuant to Art. 139(2) EPC in accordance with the prior claim system (Art. 7a. Swiss Patent Act).

### **1.5 Article 55 EPC**

Art. 55 EPC specifies two instances in which a prior disclosure of the invention is not to be taken into consideration as part of the state of the art under Art. 54 EPC: if it was due to, or in consequence of (a) an evident abuse in relation to the applicant or his legal predecessor, or (b) the fact that the applicant or his legal predecessor had displayed the invention at an official international exhibition.

In joined cases **G 3/98** (OJ 2001, 62) and **G 2/99** (OJ 2001, 83), the Enlarged Board ruled that for calculating the six-month period under Art. 55(1) EPC the relevant date is that of the actual filing of the European patent application, not the priority date.

In **T 173/83** (OJ 1987, 465) the board ruled that within the meaning of Art. 55(1)(a) EPC, there would be evident abuse if it emerged clearly and unquestionably that a third party had not been authorised to communicate to other persons the information received. Thus there was abuse not only when there was the intention to harm, but also when a third party acted in such a way as to risk causing harm to the inventor, or when this third party failed to honour the declaration of mutual trust linking him to the inventor.

In **T 585/92** (OJ 1996, 129) a patent application had been filed in Brazil on 14.7.1976 and originally claimed priority from several GB applications, the earliest having a filing date of 15.7.1975. Under Brazilian patent law, it would have been due for publication on 16.8.1977. However, the applicant abandoned all the claimed priorities, which ought to have delayed the publication for a further twelve months. Notwithstanding this abandonment of priority, the application was erroneously published before the priority date of the patent in suit. The board found that where a patent application was published early by a government agency as a result of an error, this was not of necessity an abuse in relation to the applicant within the meaning of Art. 55(1)(a) EPC, however unfortunate and detrimental its consequences might turn out to be. In order to determine whether there was an abuse in the sense of Art. 55(1)(a) EPC, the state of mind of the "abuser" was of importance. The published Brazilian application was considered to form part of the state of the art.

In **T 436/92** the board found that deliberate intention to harm the other party would constitute evident abuse, as probably also would knowledge of the possibility of harm resulting from a planned breach of such confidentiality. The state of mind of the "abuser" was of central importance (confirming **T 585/92**). The board held that the appellant had not proven, on the balance of probability, that the publications had occurred in violation of the tacitly agreed confidentiality. In other words, the publication was not an evident abuse within the meaning of Art. 55(1) EPC.

### **1.6 Availability to the public**

The state of the art comprises what has been made available to the public.

Board of appeal case law has it that the theoretical possibility of having access to information renders it available to the public (**T 444/88**), whatever the means by which the invention was made accessible, and - in the case of prior use - irrespective of whether there were particular reasons for analysing the product (**G 1/92**, OJ 1993, 27). This decision supersedes **T 93/89** (OJ 1992, 718), **T 114/90** and **T 62/87** on this point. It is not relevant, as a matter of law, whether on that date a member of the public actually saw the document or knew that it was available (**T 381/87**, OJ 1990, 213).

Particular problems may arise, depending on how the information is made available.

#### 1.6.1 Publication

In **T 611/95** a research institute known in the field was in possession of a **report** anticipating the invention, which anyone could view at the institute or order from it on request. Two papers published prior to the priority date referred to this report and indicated where it could be obtained.

In the board's view, the report was therefore publicly available. As far as availability to the public was concerned, the institute was not to be equated with a library, but the information in the documents had indicated to experts in the field that anyone could inspect or order the report there. It was thus available to the public.

In **T 842/91** the subject-matter of the claimed invention was included in a **book** to be published. Shortly before the priority date, the patent proprietor gave permission to the publisher to disclose the contents of the book as follows "... I hereby grant the book's publisher unrestricted rights of publication and waive any claims arising therefrom". Moreover, the opponent claimed that as a seminar including the subject-matter had been given shortly after the priority date, it was possible that the article had been distributed before the priority date. The board held that although the patent proprietor had clearly given the publisher permission to make the claimed subject-matter available to the public, this could not of itself amount to actually making it available. Nor could it be assumed merely from the permission given or the date of the seminar that copies had in fact been made available before the priority date.

In **T 37/96** the board had to decide on the public availability of some prior-art documents. Two

of them were **typical company papers**.

The board held that unlike scientific or technical journals, such papers could not be assumed to have automatically made their way to the public. On the contrary, whether they had indeed been available to the public on a given date depended on the particular circumstances and the evidence available.

**T 877/98** raised the question whether a **German patent** had become publicly available upon notification of the grant decision if the application had not been published previously.

The board took the view that the patent had not become available until publication of grant in the patent bulletin; only from that point on was the file open for inspection. It thus endorsed the view of the German Federal Patents Court (decision of 23.12.1994, 4W(pat)41/94, BIfPMZ 1995, 324).

In **T 165/96**, technical information about a feature of the invention had been disclosed, prior to the date of filing of the European patent application in question, in an insert in a **minor small-ads newspaper** (circulation: 24 000) distributed in the suburbs of Copenhagen.

The patent proprietor argued that in view of the newspaper's limited circulation and readership ("man on the street" in suburban Copenhagen) the information in question had effectively remained confidential and could not be regarded as forming part of the state of the art within the meaning of Art. 54(2) EPC; the document should therefore not be admitted in the appeal proceedings. He also felt that scientific or technical information published before filing in a non-technical or non-scientific context outside the scope of the art concerned, and with no references or distinguishing features enabling it to be found again afterwards, should not be regarded as directly available to the public without undue burden as per **G 1/92**.

The board ruled that, pace the patentee, publication in such a manner fulfilled the necessary and sufficient conditions for citing a disclosure against the patent. Information was "available" once people could theoretically become aware of it. A publication did not have to fulfil any specific criteria of form or layout in order to qualify as a citable disclosure.

On the "undue burden" argument, the board noted that the patentee's interpretation would introduce into the consideration of novelty precisely that subjective element which in **G 1/92** the Enlarged Board had sought to exclude. That argument was therefore not valid.

#### 1.6.2 Abstracts of documents

In **T 160/92** (OJ 1995, 35) the appellant objected to the fact that the examining division had based its judgment on whether the claimed subject-matter involved an inventive step on an **abstract of a Japanese patent document** without introducing the original document and citing specific passages from it. With respect to the question of citability of an abstract, the board held that the teaching of a previously published abstract of a Japanese patent document, considered per se without its corresponding original document, formed prima facie part of the prior art and might be legitimately cited as such if nothing on the file pointed to its invalidity. The party intending to contest the validity of said teaching on the basis of the

original document's teaching had the burden of proof. As to whether or not citing the abstract, without the original document from which it was taken, was permissible or constituted a procedural violation, the board noted that it had to be considered whether the statement based on such an abstract alone could be regarded as reasoned within the meaning of R. 51(3) EPC and R. 68(2) EPC. In the case in question, the abstract provided certain information and, for the skilled reader, there was no indication that such information was invalid. The examining division's line of reasoning was complete and understandable.

In **T 243/96**, it was established that the abstract of a document on whose basis the application in suit was refused is an independent part of the prior art in its own right. However, in view of the inadequacy of this disclosure, and the divergent views on how the abstract should be interpreted, the board decided to introduce the full document into the appeal proceedings in the form of its English translation, it being understood that the full document took precedence over the abstract.

#### 1.6.3 Repetition of oral disclosures

Where a written disclosure was published which was based on an oral disclosure at a public conference held some years earlier, it could not as a rule be assumed that the written disclosure was identical to the oral disclosure. Additional circumstances had to be put forward and proven to justify that conclusion (**T 153/88**). In **T 86/95**, the board assumed that the disclosures were identical since it was highly unlikely that the speaker would have passed over such a salient feature at the conference.

In **T 348/94** the board confirmed that a written publication allegedly based on a paper previously read at a public meeting held some time earlier (in this case ten months) could not be assumed to be identical to what was orally disclosed, and might contain additional information. As to the extent of the oral disclosure, the burden of proof remained with the opponent.

#### 1.6.4 Prior use

In **T 84/83** a new type of wide-angle mirror had been fitted to a **motor vehicle for demonstration** purposes for at least six months. The board held this to constitute prior public use as during such a time the vehicle could be expected to be parked on public highways and hence open to inspection by third parties.

In **T 245/88** several **vaporisers** had been installed in a fenced-off **area of a shipyard**. The public did not have unrestricted access to this area. The board was of the view that the vaporisers had not been made available to the public.

In **T 327/92**, the patentee claimed an expanded film laminate characterised by the feature that it be expanded by monoaxially drawing it. The product of the process of a citation comprised a laminate which was stretched in one direction and then, within a short time, further stretched at right angles to this direction; in this process a monoaxially stretched laminate existed, at least, for 60 seconds. The board held that the **intermediate product** which existed only for some 60 seconds before being further processed destroyed the

novelty of the patentee's claim because it met all technical characteristics required by the claim. It allowed, however, a claim directed to a not yet disclosed use of the monoaxially stretched laminate.

For the preconditions for claiming prior use, see p. 358 and p. 473 ff.

#### 1.6.5 Biological material

In the field of microbiology, in **T 576/91** the board conceded that an unwritten rule may exist within the scientific community whereby biological material referred to in a scientific publication can be freely exchanged. However, this does not amount to an obligation, so that any biological material which is the subject of a publication can be considered as being publicly available. The board further stated that if contractual obligations between parties resulted in access to biological material being deliberately restricted to a group of persons bound either by a research contract or a licence, it could not be concluded that this material had been made "available to the public" under the terms of Art. 54(2) EPC. In **T 128/92** the board stated that for a complex biochemical to be made available to the public, the minimum that would seem to be required for publication was a notice to those in the field that samples of the biochemical could be obtained on request, and clear evidence of exactly what the biochemical was.

#### 1.6.6 The concept of "the public"

Over the years, the boards have arrived at a clear definition of "the public". Information is said to be "available" to the public if only a single member of the public is in a position to gain access to it and understand it, and if there is no obligation to maintain secrecy.

This was the opinion in **T 482/89** (OJ 1992, 646), where the board said that a single sale was sufficient to render the article sold available to the public within the meaning of Art. 54(2) EPC provided the buyer was not bound by an obligation to maintain secrecy. It was not necessary to prove that others also had knowledge of the relevant article.

The sale of an object to a single customer who is not obliged to maintain secrecy renders the invention public, even where the object is to be used in a prototype, which is itself to be kept confidential until it is mass produced (**T 1022/99**)

Parties sometimes try to argue that information was not publicly available because the person who received it was **not skilled in the art**.

In the opinion of the board this was the case when the article was sold to a man not skilled in the art (likewise **T 482/89** (OJ 1992, 646), **T 953/90**, **T 969/90** and **T 462/91**). In **T 809/95**, the board did not accept the argument by the patentee that his invention (used in bottle-making) had not been disclosed through a test because although the participants had taken home bottles made using the invention they were not specialists in the field concerned. According to the board, the word "public" in Art. 54(2) EPC did not necessarily mean the skilled person (see also **T 482/89**, OJ 1992, 646). Furthermore, the bottles' inventive features were obvious, and could be appreciated without technical knowledge.

## *Novelty*

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In **T 165/96**, the board held that "the public" within the meaning of Art. 54(2) EPC did not presuppose a minimum number of people or specific educational qualifications; the residents of a Copenhagen suburb sufficed.

The word "public" in Art. 54(2) EPC does not necessarily refer to the man in the street according to **T 877/90** and **T 406/92**: a disclosure before a skilled person makes it "public" in the sense that the skilled person is able to understand the disclosure and is potentially able to distribute it further to other skilled members of the public (see also **T 838/97**).

Another argument sometimes used is that information was given only to a **limited circle of people** and therefore not publicly available.

In the opinion of the board the information is publicly available where it was made available to a limited circle of people (**T 877/90** - congress; **T 228/91** - course; **T 292/93** - demonstration for potential customers conducted on the premises of a company with close links to the opponent).

In **T 398/90** a marine engine installed in a ship was held to have been known to the engine room crew and hence to have been made available to the public.

On the other hand, in **T 300/86**, the board took the view that the fact that the report of the invention was passed on to a large, but limited, circle of persons did not of itself make the document available to the public if all the recipients of the document were bound to secrecy, and there was nothing to indicate that the recipients broke their pledge of secrecy.

In **T 1085/92** the board ruled that a company's own staff could not normally be equated with "the public" within the meaning of Art. 54(2) EPC.

**T 11/99** too confirmed that information was publicly available even if only a single member of the public could obtain and understand it, and was not bound to secrecy. The respondent had argued that 8 700 members of a Japanese society of chemical engineers was not "the public" in Japanese terms.

### 1.6.7 Obligation to maintain secrecy

If the person who was able to gain knowledge of the invention was under an obligation to maintain secrecy, the invention cannot be said to have been made available to the public, provided the person did not breach that obligation.

If the obligation to maintain secrecy stems from an express agreement that has been observed, the information has not been made available to the public. Less clear cut are cases of tacit secrecy agreements, or where the obligation to maintain secrecy stems from the circumstances. There is considerable case law on this point.

(a) Distribution of prospectuses, technical descriptions, etc

In **T 173/83** (OJ 1987, 465) and **T 958/91** the board held that a technical description sent out



to clients could not be regarded as secret information.

(b) Displaying the invention

**T 87/90** dealt with a case where there had been unrestricted access to a sheetfed offset printing press featuring an integrated coating unit awaiting delivery to a customer in the assembly shop of the manufacturer. The invention related to the coating unit. The press was noticed by chance by another client inspecting a press ordered for his company. Although he was not given a working demonstration of the coating unit, all the details were explained to him. In the light of experience the board took the line that a company's commercial interest in obtaining follow-up orders outweighed any considerations of secrecy and that this therefore amounted to prior public use.

In **T 1085/92** a brush holder had been manufactured by a third party on behalf of the appellants on the basis of drawings provided by the appellants and then fitted in an assembly line owned by the appellants to which visitors to the company had had access. It could not be ascertained whether in this case there had been an express secrecy agreement, although a note did exist prohibiting the release of the drawings. The board took the view that where such contractual relations and development agreements existed a secrecy agreement could be assumed to exist. Fitting the device in the assembly line did not make the invention evident to visitors, so anticipatory prior public use could not be said to exist (see also **T 365/93**).

(c) Sub-contracting

In **T 830/90** (OJ 1994, 713) the actions constituting prior use were based on meetings between the shipyard commissioned to build a new ship and two rival sub-contractors, namely the patent proprietors and the opponents. The meetings involved the submission of quotations to the shipyard. The drawings shown during the meeting bore clearly visible stamps referring to Sections 18-20 of the German law prohibiting unfair competition and Section 823 of the German Civil Code (liability for damages on the grounds of actionable tort). The witnesses had stated that for them confidentiality had been a matter of course. Faced with these facts the board took the view that a confidentiality agreement had - at least implicitly - been reached. This was perfectly sufficient. Furthermore, in line with general experience, it had to be assumed that such an agreement would be observed at least as long as there was a common concern for secrecy. Such concern would last at least for the period required to safeguard the interests of the business partners. These interests might, for example, include the co-operation phase in which there was still no protection in law, or in which there was still joint further development of the new mechanism.

In **T 799/91** the opponents asserted that the subject-matter claimed had been in prior public use in that its manufacture had been "sub-contracted out" to a third company. According to the board the third company was not simply any third party because the opponents' decision to place an order was based on a relationship of trust. The board therefore saw no indication of there having been prior public use, nor could the claim have been substantiated by the testimony of any witness.

(d) Demonstrating products for presentation purposes

In **T 634/91** the claimed prior public use consisted of the presentation of a circular saw at an opponent's place of business during a meeting between the patent proprietor and a potential buyer. Without elucidating further, but referring to the decision in **T 830/90** (OJ 1994, 713), the board held that such talks constituted a tacit understanding to maintain secrecy.

In **T 292/93**, the board ruled that a demonstration conducted for a small group of potential customers on the premises of a company with close links to the opponent was inconsistent with the existence of an obligation to maintain secrecy.

In case **T 478/99** a demonstration was made by two potential clients. It could not be proven that a confidentiality agreement existed. The board held that the sole absence of an explicit request of confidentiality was not sufficient for concluding that there was no confidentiality because secrecy may result from an ethical conduct of the employees of big companies like the two clients in question. Consequently, the board considered the alleged public prior use not to be proven.

In **T 823/93**, the opponent had sold a company a packaging apparatus with characteristics similar to the patented apparatus. Delivery had been made after the patent's date of priority, but the apparatus had been presented to the company's employees prior to that date. The packaging apparatus had been developed on the basis of an order from the client. The order did not relate to a finished product but to a complex system needing to be adapted to the purchaser's requirements. The apparatus had been developed as the solution to a specific technical problem envisaged by the client himself. The question was whether the client had required the employees to whom the apparatus had been presented to treat the presentation as confidential.

According to the board, the development of a new apparatus is usually kept secret from competitors. In the case at issue, the development of the apparatus had to be regarded as the result of co-operation between the opponent and the client. The board therefore took the view that, on the basis of these facts, it could be assumed that none of the parties had an interest in disclosing any information about the apparatus and it was likely that the technical reports exchanged between the parties were tacitly required to be treated as confidential. The board also held that the general conditions of business, which had become the conditions of contract and required the plans, designs and other documents to be handled confidentially, also extended to verbal information and details given during the presentation of the apparatus. In these circumstances, the board decided that the employees to whom the apparatus had been presented could not be considered as members of the public within the meaning of Art. 54(2) EPC.

(e) Presenting the product in writing

In **T 887/90**, the alleged prior public use hinged on the submission of two quotations, each of which had involved a series of technical discussions with the potential customers. The quotations had not been for finished products, but for systems requiring adjustments to the clients' requirements. The drawings, without which the quotations would have been

meaningless, bore clear references to Section 18 of the German law prohibiting unfair competition which had been noted by the clients. The board took the line that an obligation to maintain secrecy was clear from the circumstances. The recipients of the quotations had no discernible reason for passing on the contents of the quotation to third parties and hence for choosing to ignore the references on the drawings. Simply to claim that no mention had been made of any obligation to maintain secrecy was insufficient to invalidate the assumption that there had been an implicit agreement to maintain secrecy. Nor was the fact that sales representatives had also been present enough to prove the contrary.

In **T 541/92** a sub-contractor had given sketches of a device to their client. In the board's view this constituted an obligation to maintain secrecy. It was standard practice for clients and their subcontractors to keep their projects secret, and allegations to the contrary required convincing proof.

In **T 1076/93** the opponents had, without there having been an explicit agreement to maintain secrecy, offered an apparatus which caused the subject-matter of the invention to lack novelty and had provided drawings to a weapons manufacturer. The board held that the prior use did not cause lack of novelty because a variety of circumstances pointed to there having been an obligation to maintain secrecy. According to the board discretion was generally acknowledged to be the rule on the premises of such companies. The business contacts between the opponents and the weapons manufacturer were restricted to specific individuals. Furthermore, aside from the discretion commonly observed in this branch of industry, almost all the papers used by staff at the company in question bore warnings about the need for confidentiality. It had been demonstrated that this company did not as a matter of principle allow the details of quotations to be passed on to third parties.

In **T 818/93** the relevant prior art document was a declaration made by the inventor before the USPTO, plus Exhibits 1 and 4 mentioned therein. Several companies had been contacted in an (unsuccessful) attempt to interest them in developing and funding research into the intraluminal graft outlined in Exhibit 1. Exhibit 4 had been sent to the inventor's superior, a professor at the University of Texas Health Science Center at San Antonio, after which discussions had been held with him and a research assistant at this university with a view to obtaining the necessary equipment for carrying out the research and fabrication and for testing the graft. In the board's judgment, all these steps and approaches had been taken within the context of business relationships which were necessary to bring the project to a successful conclusion. Such negotiations were confidential by nature in view of the comparable interests of the parties involved and implied a secrecy agreement. In the board's view and contrary to the respondent's assertion, a written agreement was not necessary to rule out any involvement of a third party so that, in the case at issue, implicit confidentiality had not been breached by the meetings and negotiations prior to the filing date of the contested patent.

In **T 480/95** the document relied upon by the opposition division as a prepublication decisive for the evaluation of inventive step was a letter from the opponent to a customer written in connection with a contractual relationship between the two firms. In this letter the opponent gave advice as to the way in which a certain programmed memory solved specific processing problems. The board considered this letter to be a typical example of correspondence

between contracting firms, which was confidential by its very nature.

(f) Making available for test purposes

A product made available for test purposes is to be treated as confidential. Sale of the product in a limited quantity is regarded as sale for test purposes, if the product is normally sold in large quantities (see **T 221/91**, **T 267/91** and **T 782/92**).

In **T 602/91** the opponents had conducted an experiment using the patent proprietors'/respondents' invention before the priority date at which at least two employees of the appellant company had been present. That there had been no express agreement and secrecy was undisputed. Nor, in the board's view, had there been any tacit agreement either, as the two parties had not concluded a development agreement or entered into any other contractual relations that would indicate either of them having had any particular interest in a secrecy agreement. Furthermore, a single case of co-operation between a manufacturer and a potential end-user of the product was not sufficient to assume that a tacit agreement on secrecy had been entered into. Good relations alone were not enough for a tacit agreement to develop, particularly as in this case the appellants had a financial interest in disclosing the invention to the respondents' competitors.

In case **T 809/95** the granted patent was inter alia for a plastic bottle whose special features related to its foldability. One of the opponents alleged two cases of prior use. One of these had occurred in connection with a "market test" performed by a market research company on behalf of the third party to gauge the market for such bottles. The patent proprietor claimed that both prior uses had been subject to confidentiality rules.

As far as the prior use through market research was concerned, the board held that the very fact that the third party had chosen a test variant allowing the test participants to take the bottles home indicated that it attached no particular value to confidentiality in the patent sense. Nor was there any circumstantial obligation to maintain secrecy since the market research institute did not employ or have a business relationship with the test persons. Allowing the bottles to be taken home and used freely was rather evidence against any obligation to maintain confidentiality.

In **T 1054/92** of 20 June 1996, the opponent had alleged and proved that the claimed invention, an absorbent structure for diapers, had been tested in public tests carried out by several hundred members of the public at several places in the USA over several weeks. The appellant (patent proprietor) had admitted not being certain that the tests were confidential but he was of the opinion that it was up to the respondent to prove without doubt that there was no bar of confidentiality. In the absence of such proof, the board should find on the balance of probabilities that the tests were confidential. The board was convinced in the light of common experience that it was very unlikely that these tests had been kept confidential, particularly since some of the used diapers had not been returned to the appellant. The board confirmed, against the opinion of the appellant, that the burden of proof for the existence of a secrecy agreement was on the patent proprietor. Since he could not prove the existence of secrecy agreements with the participants in these tests, the board found that they were not confidential.

(g) Conferences

In **T 739/92** an oral description of the invention had been given in a conference. The question was whether the participants at this conference were bound to secrecy and could therefore not be seen as the public within the meaning of Art. 54(2) EPC. The list of participants showed that the conference was open to every specialist active in the relevant field. The participants were not prohibited from disseminating oral information from the conference, or from publishing information from it provided that they omitted any reference to the conference. Recording the lectures on tape, etc. and photographing slide material were prohibited. Guests were not permitted to attend the conference lectures and discussions. The board held that under these conditions the participants at this conference were to be regarded as normal members of the public since there was no secrecy agreement. In contrast to the situation in **T 300/86**, the participants were not licensees of the organisers, nor subject to a blanket contractual prohibition from communicating the information they obtained to third parties.

In **T 202/97** the board held that a draft standard sent together with an agenda to the members of an international standards working party as part of the preparations for a meeting on standards was not normally confidential and was thus available to the public. Even though only a particular group of persons had been invited to take part in the meeting on standards, it was the task of a standards committee to draw up proposals for standards which had been agreed on on as broad a basis as possible with the experts in the field, and which were based on the current state of developments. This task precluded any obligation to maintain confidentiality.

In **T 838/97** the invention was presented orally at a conference attended by about 100 of the most renowned experts in the respective technical field including potential rivals. The participants were explicitly instructed that information presented at the conference was not to be used without the specific authorisation of the individual who made the contribution. The board considered that the participants were bound by a confidentiality agreement and thus the invention was not to be considered to be part of the state of the art.

(h) Joint venture agreement

A joint venture agreement obliges the parties to secrecy even without an explicit clause to that effect (**T 472/92**).

## **1.7 Issues of proof**

### 1.7.1 Nature of the evidence

In **T 611/97** the appellant/opponent had listed various gun alignment systems which he alleged had been made available to the public in various ways (through being advertised, manufactured or sold, or through the distribution of catalogues).

The board stated that it was immediately obvious that a variety of actions, eg describing the system in a catalogue and selling it, usually meant that a different product was made available to the public. A person skilled in the art could, for example, dismantle and analyse

## *Novelty*

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a system which had been made unrestrictedly available to the public by being sold in order to obtain technical information not necessarily contained in the catalogue. The alleged availability of a product based on the distribution of catalogues and the alleged sale of a system described in such catalogues therefore represented different cases of availability, each of which had to be proved separately.

### 1.7.2 Burden of proof

Where lack of novelty is alleged, the burden of proof invariably lies with the party claiming that the information in question was made available to the public before the relevant date (see, for example **T 193/84**, **T 73/86**, **T 162/87**, **T 293/87**, **T 381/87** (OJ 1990, 213), **T 245/88** and **T 82/90**).

According to **T 766/91** (point 8.1) and **T 919/97** (point 4.4), evidence of general technical knowledge need be submitted only if the latter's existence is disputed.

In **T 743/89**, however, the board applied the principle of prima facie evidence. Here, it had been proved that a leaflet disclosing the invention had been printed seven months before the date of priority, but it was uncertain when the leaflet had been distributed. The board took the view that, although the date of distribution could no longer be ascertained, it was reasonable in any event to assume that distribution had occurred within the seven-month period. The respondents contended that this was not the case, but the board considered this assertion to be so lacking in plausibility that it placed the onus of proof on the respondents.

In decisions **T 73/86**, **T 162/87**, **T 293/87**, **T 708/89**, **T 82/90**, **T 600/90**, **T 267/91**, **T 782/92** and **T 34/94** the boards assumed that all the circumstances surrounding prior use must be proved by the party raising the objection.

In **T 326/93**, the board held that in assessing public prior use the burden of proof lay with the opponent, who had to show, on the balance of probabilities, firstly that the invention had been publicly demonstrated before the priority date and secondly that the skilled person would have drawn the necessary teaching from the demonstration (see also **T 472/92**, OJ 1998, 161, **T 750/94**, OJ 1998, 32 and **T 848/94**).

Ruling on an objection of prior public use in **T 221/91** the board took the line that it was for the patent proprietors to prove the existence of an obligation to maintain secrecy when the opponents had proved that the invention had been made available to the public and the patent proprietors had claimed the existence of a secrecy agreement (see also **T 969/90** and **T 1054/92** of 20.6.1996).

In **T 901/95** the board decided that merely claiming that generating equipment was installed into ships at three different **shipyards** and thus available to the public was not enough to demonstrate its obvious prior use. Shipyards were normally considered restricted areas and thus not open to the general public. This applied all the more to installations built into ships in the yards. Nor could the possibility be excluded that shipyards' business partners might secure their common interests through explicit or tacit secrecy agreements, in the absence of other protection. In the case in point, it was also questionable whether the relevant process

steps and the functional arrangement of the switching means were apparent from merely looking at built-in apparatus; nor was it certain when the generating installations had become operational.

Both parties dispensed with oral proceedings and no witnesses were heard; the board did not in these circumstances consider the alleged public prior use.

In **T 887/90** the obligation to maintain secrecy was derived from the circumstances. In this case the board's view was that the onus for proving the contrary lay entirely with the opponents. See also **T 541/92** and the chapter VI.J. "Law of evidence".

In **T 472/92** (OJ 1998, 161) the board ruled that the existence of a joint venture agreement implied an obligation to maintain secrecy.

#### 1.7.3 Standard of proof

In **T 48/96** the board stated that, in order to prove the allegation that a particular apparatus described in a catalogue had been available to the public before the priority date, it was not sufficient to show that the catalogue had been published on time, because a mere indication in a catalogue did not constitute absolute proof that the described product had in fact been available to anybody.

In **T 77/94**, the board decided that the argument that a publicity notice's date of issue was necessarily immediately after its date of printing (because such notices were only produced in order to be issued) was merely a supposition which required confirmation; in reality, things were often different.

In **T 729/91**, one relevant document was an issue of a monthly periodical, intended for hoteliers and caterers and which could be bought in South Africa. In accordance with the evidence brought forward in the case, a copy of this periodical was received by a particular library on 9.8.1984, ie before the priority date (13.8.1984) of the patent in suit. The librarian stated that publications were "generally available to the public as of the date of receipt". There was no absolute certainty that this was the case with the publication in question. The board was of the opinion that the EPO must decide what happened having regard to the available evidence on the balance of probabilities, ie it must decide what was more likely than not to have happened. In the present case, it was, in the board's view, clearly much more likely that the publication was available to the public as from the date of receipt. In the absence of evidence to the contrary, the board accepted that what in fact happened was what the librarian stated would "generally" happen. So the publication was considered to have been made available to the public before the priority date.

For more details regarding proof in connection with public prior use, see also chapter VI.J. on "Law of evidence".

#### 1.7.4 Obligation of the EPO to examine of its own motion

A number of cases of alleged prior use called upon the boards to define the extent of the

EPO's obligation under Art. 114 EPC to examine of its own motion. In these cases either the opposition had been withdrawn at the appeals stage and establishing prior public use had proved difficult, or the alleged prior use had not been substantiated.

In **T 129/88** (OJ 1993, 598) the board took the view that the EPO's obligation to examine matters of its own motion did not extend as far as investigating an allegation of prior public use, where the party formerly making the allegation had withdrawn from proceedings, and it was difficult to establish the facts without its co-operation. See also **T 830/90** (OJ 1994, 713), **T 887/90** and **T 420/91**.

In **T 582/90** the board ruled that an objection of prior public use had to be examined if it appeared to be relevant, even if it had not been sufficiently substantiated.

## **2. Determining the content of the relevant prior art**

After establishing what information forms the state of the art, the next step is to determine its technical content and whether that content is apparent.

The consistent view in the case law is that for an invention to lack novelty its subject-matter must be clearly and directly derivable from the prior art (see eg **T 465/92**, OJ 1996, 32; **T 511/92**) and all its features - not just the essential ones - must be known from the prior art (**T 411/98**). The disclosure is determined by what knowledge and understanding can and may be expected of the average skilled person in the technical field in question (**T 164/92**, OJ 1995, 305 Corr. OJ 1995, 387; **T 582/93**).

Determining the information content means interpreting what the state of the art comprises. The boards have laid down certain principles to be observed in this process.

### **2.1 General rules of interpretation**

In **T 600/95**, the board held that the interpretation of the technical disclosure contained in a given document does not normally depend on the **purpose** it serves, be it as representing state of the art, priority document or the application as filed.

In **T 312/94**, the board held that it was a general legal rule for the interpretation of any document, in particular a patent application or patent, in order to determine its true meaning and thus its content and disclosure, that no part of such a document should be construed in isolation from the remainder of the document: on the contrary, each part of such a document had to be construed in the **context of the contents of the document as a whole**. Thus, even though a part of a document appeared to have a particular meaning when interpreted literally and in isolation from the remainder of the document, the true meaning of that part of the document could be different having regard to the remainder of the document.

In **T 969/92** the board decided that in order to determine what had been made available to the public, not only the main claim but also the remainder of a **patent document** had to be carefully considered for guidance as to what had really been taught in the prior document, ie its real express and implicit information content.



*I.C.2. Determining the content of the relevant prior art*

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In **T 158/96**, in the examining division's opinion the use of the compound "sertraline" for the manufacture of a medicament to treat obsessive-compulsive disorder (OCD) was not novel with regard to a document disclosing that sertraline was undergoing clinical trials for OCD shortly before the priority date. The examining division stressed that, for the purposes of patent disclosure, it was common practice to accept any pharmacological test as the disclosure of a medical use, as long as this test was commonly accepted as an indicator of potential therapeutic utility.

The board did not share the examining division's conclusion in the case at issue. For a prior-art document to be recognised as prejudicial to the novelty of a claimed subject-matter, the information conveyed by this document could not be interpreted on the basis of rules, which, though normally valid, did not necessarily apply to the specific situation and therefore might lead to **speculative conclusions**.

The information in a citation that a medicament was undergoing a clinical phase evaluation for a specific therapeutic application was not prejudicial to the novelty of a claim directed to the same therapeutic application of the same medicament if such information was plausibly contradicted by the circumstances and if the content of said citation did not allow any conclusion to be drawn with regard to the actual existence of a therapeutic effect or any pharmacological effect which directly and unambiguously underlay the claimed therapeutic application.

In **T 943/93** the board held that a **hypothetical possibility** of operating within the claimed region per se was legally not sufficient to deprive this region of novelty, particularly if the skilled person had no technical motive and thus no practical necessity to work within this region.

In **T 378/94** the board ruled that facts which could be inferred from a source of information only by a process that could be described as "**obverse inference**" were not immediately recognisable. A subject-matter could be regarded as having been disclosed by a specific information source only if it could be directly and unambiguously inferred from that source. The board also found that other embodiments too came under the general concept mentioned above. It then went on to explain the relationship between the scope of protection of the claims and their disclosure. The board was of the opinion that the scope of protection of a patent claim giving the technical features of an invention, which claim consisted of one or several concepts serving mostly to generalise one or several specific examples disclosed in the description and drawings, could not be equated with the disclosure resulting directly from the wording of that claim. The scope of protection was connected with the extent of the concept or concepts defined in the claim, ie with the totality of every individual subject-matter showing all the features of such concept(s), whereas the disclosure was connected with the content of such concept(s), ie with the totality of features that made it possible to group together at an intellectual level each individual subject-matter. If a claim dealt with general concepts, it disclosed only these general concepts and not all the specific examples that came under these general concepts.

Decisive for novelty in **T 464/94** was a citation disclosing a preliminary test to transform plant protoplasts with selective markers. The opposition division had considered it probable that

this document anticipated the patent in dispute.

In the board's view, it was not justifiable to decide whether a document was prejudicial to novelty on the **basis of probability**. When a patent was revoked for lack of novelty, the department concerned had to be sure, having taken all the facts and arguments put forward during the proceedings into consideration, that the revocation was justified. If in doubt, further evidence had to be adduced, otherwise the patent could not be revoked for lack of novelty.

In **T 233/90**, the board took the view that in a case where a document comprised in the state of the art under Art. 54(3) EPC referred to "**a usual manner**" of preparing a product, it was permissible to use documents of reference such as handbooks, encyclopaedias or dictionaries in order to determine what the skilled person would have understood by such a reference on the effective date of the prior document.

## **2.2 Combinations within a prior art document**

In **T 305/87** (OJ 1991, 429) the board considered it expedient to state that in order to assess novelty it was not sufficient to limit oneself to the contents of a single document taken as a whole but rather it was necessary to consider separately each entity described therein. The subject-matter of the patent under appeal was a shear. The opponents maintained that the features, taken as a whole, of two shears which were disclosed in a catalogue, had to be regarded as a single state of the art because those shears were described in one and the same technical context and in one and the same document. They argued that, when taken as a whole, this set of known features anticipated the invention. The board, however, made it clear that it was not permissible to combine **separate items belonging to different embodiments** described in one and the same document merely because they were disclosed in that one document, unless of course such combination had been specifically suggested there. The two shears known from the catalogue were therefore definitely two separate entities forming two independent bases for comparison which ought to be considered in isolation when assessing novelty, and it was not admissible to piece together artificially a more relevant state of the art from features belonging to one or both of these entities, even if they were both disclosed in one and the same document (see **T 901/90**, **T 931/92** and **T 739/93**).

In **T 332/87** the board held that when examining novelty, different passages of one document might be combined provided that there were no reasons which would prevent a skilled person from making such a combination. In general, the technical **teaching of examples** might be combined with that disclosed elsewhere in the same document, eg in the description of a patent document, provided that the example concerned was indeed representative of or in line with the general technical teaching disclosed in the respective document. In the case at issue, the board concluded that a particular composition in an example was not in agreement with the general technical teaching of the prior art document and that in view of this discrepancy the skilled person would not have combined the said disclosure with this example.

In **T 42/92** it was explained, in accordance with the boards' established case law, that a republished patent specification formed part of the state of the art under Art. 54(2) EPC only

as regards those elements which the person skilled in the relevant art would incontestably infer from the document as a whole. The disclosure of a prior-art patent specification did not however cover combinations of individual features arising from **reference back to the claims** if those features were claimed separately for patent-law considerations and combining them was not supported by the description, or even - as here - was at odds with the embodiments described.

In view of the objection as to lack of novelty, the question to be answered in decision **T 610/95** was whether or not the proposed solution in the patent was derivable directly and unambiguously from the disclosure of citation (2), which contained **cross-references** to the entire content of **three patent specifications** without giving priority to any of these references. Each of these references offered a plurality of different options for preparing pressure-sensitive layers of medical dressings.

The board held that, under these circumstances, it could not be said that the use of the specific product acting as pressure-sensitive material in the claimed invention was directly and unambiguously derivable from the wholly general reference to the three different prior documents quoted in citation (2) and had therefore already been made available to the public.

### **2.3 Taking implicit features into account**

In **T 6/80** (OJ 1981, 434) the board found that where a further functional attribute of an element of a **device** disclosed in a document was immediately apparent to a person skilled in the art reading the document, such attribute formed part of the state of the art with regard to that device.

Any prior-art disclosure is novelty-destroying if the subject-matter claimed can be inferred directly and unequivocally from that disclosure, including features which for the skilled person are implicit in what is explicitly disclosed (see **T 677/91**, **T 465/92** (OJ 1996, 32) and **T 511/92**).

In **T 666/89** (OJ 1993, 495) the term "available" clearly went beyond literal or diagrammatical description, and implied the communication, express or implicit, of technical information by other means as well. One example of the available **information content of a document** extending beyond this literal descriptive or diagrammatical content was the case where the carrying out of a **process**, specifically or literally described in a prior art document, **inevitably resulted in a product** not so described. In such a case, the board stated, the prior art document would deprive a claim covering such a product of novelty. It was thus content, express and implied, rather than mere form, that was decisive for the issue of novelty in general, and "selection" novelty in particular (see **T 793/93**).

In **T 518/91** the board held that the logical interpretation by a skilled person of technical facts explicitly stated in a prior document - in particular the definition beyond the explicit disclosure of the document of features of the prior art described in general terms - was not part of the technical teaching implicitly derivable from the document, which the skilled person would automatically infer, if it contradicted other explicit technical information in the otherwise consistent overall disclosure of the document.

In **T 624/91** it was held that exact **disclosures for alloy compositions** in the state of the art had to be interpreted as average or nominal values within a small range in view of known fluctuations in reproducibility and in analytical results, unless there was evidence available to the contrary. The board pointed out that whenever a metallurgist aimed at producing an alloy in accordance with a given nominal composition, the composition of the final product would deviate somewhat from this target or even be undefined within certain narrow limits. The metallurgical production process was not ideally reproducible and the actual composition of different batches aiming at the same nominal composition would be spread over a certain area around this target. Consequently, the nominal composition of a cited alloy not only disclosed the composition as a specific point which nobody would be able to realise in practice, but also a certain range around this average or nominal composition into which the majority of the analyses of those alloys fell which had been prepared aiming at the nominal composition and using the care usual in this art when producing and analysing an alloy.

In **T 71/93** it was held that a feature not explicitly mentioned in a prior art document, even though generally known to help overcome a drawback usual in the same technical field, could not be considered implicitly disclosed if it were not directly derivable from the prior art document that the drawback was considered unacceptable and/or if other solutions were proposed for overcoming the drawback.

In decisions **T 572/88** and **T 763/89** the boards warned against using the concept of "implicit prior description" in such a way that considerations relevant to the evaluation of inventive step were transferred to the assessment of novelty. A fair assessment of an invention's patentability called for a clear distinction between novelty and inventive step. In decision **T 763/89**, for example, the opponent could not claim "implicit prior description" for a material with exactly three layers, as claimed in the disputed patent, on the grounds that a skilled person, aware of the considerable outlay required for further sub-layers and the limited improvement in the quality of the image they bring, would have understood the wording of the claim, which set no upper limit for the number of layers, to be virtually synonymous with "two or three layers". To do so would be to adduce a typical criterion for the evaluation of inventive step.

In **T 71/93** the board held that an "implicit prior description" of a feature could not be based on the grounds that a person skilled in the art would have been aware of some disadvantages and of the lack of other forms of improvement related to a feature, since this was a criterion for the evaluation of inventive step.

#### **2.4. Taking intrinsic features into account**

In **T 59/87** (OJ 1991, 561) the respondent had contended that a particular document inherently disclosed the claimed invention and was thus destructive of novelty. However, the board stressed that in **G 2/88** (OJ 1990, 93; Corr. 469) it was emphasised that the question to be decided was what had been made available to the public, not what might have been inherent in what was made available to the public. Furthermore, when considering how far the teaching in a written description also made the inevitable result of carrying out such teaching available to the public, in each case "a line must be drawn between what is in fact made available and what remains hidden or otherwise has not been made available". Thus,

the board decided that whether a previously undisclosed technical effect, which in fact inevitably occurred when a previously disclosed technical teaching in a written description was carried out, had been made available to the public by reason of the teaching in the written description was a question of fact which had to be decided in the context of each individual case.

**G 1/92** (OJ 1993, 277) further stipulated that a commercially available product did not per se implicitly disclose anything beyond its composition or internal structure. Other characteristics, which were only revealed when the product was exposed to interaction with specifically chosen outside conditions in order to provide a particular effect or result, or to discover potential results or capabilities, therefore pointed beyond the product per se as they were dependent on deliberate choices being made and thus could not be considered as already having been made available to the public.

Further to this decision, the board held in **T 977/93** (OJ 2001, 84) that a product made available to the public was not reproducible within the meaning of **G 1/92**, and thus did not belong to the state of the art, if the skilled person could not establish identity of the reproduced product with the commercially available one because the intrinsic and extrinsic features of the product were not accessible and there was a high probability of variation upon reproduction.

## **2.5 Taking equivalents into account**

The case law of the boards of appeal is based on a narrow concept of novelty, i.e. the disclosure of a prior document does not include equivalents of the features which are explicitly or implicitly disclosed; equivalents can only be taken into account when it comes to considering inventive step (see **T 517/90**). This narrow concept of novelty, which excludes equivalents, is of particular importance for the application of Art. 54(3) EPC. In **T 167/84** (OJ 1987, 369) the board commented that conflicting applications within the meaning of Art. 54(3) EPC were included in the state of the art solely from the point of view of novelty, but were considered in the light of their "whole contents". In order to mitigate the harsh effects of the "whole contents approach", its application was confined to novelty (see Art. 56 EPC, second sentence). Further, in order to reduce the risk of "self-collision", it had always been considered justified to adopt a strict approach to novelty. For this reason C-IV, 7.2 of the Guidelines expressly stated that "when considering novelty, it is not correct to interpret the teaching of a document as embracing well-known equivalents which are not disclosed in the document; this is a matter of obviousness". Accordingly, the board held that the "whole contents" of an earlier document did not also comprise features which were equivalents of features in the later document (see also **T 928/93**).

## **2.6 Taking drawings into account**

In **T 896/92** the board emphasised that in accordance with **T 169/83** (OJ 1985, 193) further conditions were required as to the disclosure of a feature shown solely in a drawing. In this respect, not only should the structure of the feature be shown sufficiently clearly in the drawing, but also the technical function achieved should be derivable (see also **T 241/88**).

In **T 204/83** (OJ 1985, 310) the board held that features shown solely in a drawing formed part of the state of the art when a person skilled in that art was able, in the absence of any other description, to derive a technical teaching from them. Dimensions obtained merely by measuring a diagrammatic representation in a document did not, however, form part of the disclosure (see **T 857/91** and **T 272/92**).

In **T 56/87** (OJ 1990, 188) the board held that a technical feature which was derived from or based on dimensions obtained from a diagrammatic representation and which technically contradicted the teaching of the description, did not form part of the disclosure of a document.

### **2.7 Taking examples into account**

In **T 12/81** (OJ 1982, 296) the board held that the teaching of a cited document was not confined to the detailed information given in the examples of how the invention was carried out but embraced any information in the claims and description enabling a person skilled in the art to carry out the invention (see also **T 562/90**). In **T 424/86** the board stated that the disclosure of a document was not to be construed only on the basis of the examples thereof; rather, the entire document had to be taken into consideration (see also **T 373/95**). In **T 68/93** the board stated that it was not allowable to take a particular example out of context. In **T 12/90**, the board decided that the disclosure in a prior document likely to affect the novelty of a claim was not necessarily limited to the specific working examples but also comprised any reproducible technical teaching described in the document (see also **T 247/91** and **T 658/91** ).

In **T 290/86** (OJ 1992, 414) the board decided that what was "made available to the public" by specific detailed examples included in a document was not necessarily limited to the exact details of such specific examples but depended in each case upon the technical teaching which was "made available" to a skilled reader. The amendment of a claim by including a disclaimer in respect of such specific detailed examples could not render the claim novel.

In **T 365/89** the board held that Art. 54(1) EPC did not require that a technical teaching had to be disclosed in detail, eg by working examples. Thus, the presence or absence of such more detailed information did not influence the answer to the question whether or not the relevant disclosure in a particular document belonged to the state of the art.

In **T 666/89** (OJ 1993, 495) the respondent argued that the examples of a particular prior art document lay outside the scope of a particular claim and that the generic disclosure therein could not be held to be an anticipation of this claim. As a result, only the examples of a document should be regarded as state of the art. The board stated that the respondent had ignored the established jurisprudence of the boards of appeal, according to which it was necessary to consider the whole content of a citation when deciding the question of novelty. In applying this principle, the evaluation was therefore not to be confined merely to a comparison of the claimed subject-matter with the examples of a citation, but had to extend to all the information contained in the earlier document.

## **2.8 Assessment of prior uses**

Several decisions have concerned the information content of prior uses.

In **T 245/88** two vaporisers had been installed in a fenced-off area of a shipyard. As far as the opportunity to view these vaporisers from outside the fence was concerned, the board was not convinced that a person skilled in the art, without the knowledge of the subject-matter claimed in the contested patent, would have recognised the teaching it contained and the problem it sought to solve, or that he would have detected the claimed spacing ratio among the many dimensions and dimension ratios which could be derived from a multi-tube vaporiser.

In **T 363/90** a machine fitted with a sheet feeder corresponding to the claimed invention had been exhibited and demonstrated at trade fairs. The board concluded that, under the circumstances, it was impossible for the skilled person to recognise - or to infer on the basis of further information - the technical features and the functions of the exhibited sheet feeder to an extent which would have enabled him to copy its design, let alone develop it further (see also **T 461/88** (OJ 1993, 295).

In **T 87/90** the features and functions of a press that had been open to view were ruled to have been made available to the public because full details of the press had been given and information material distributed.

In **T 208/88** (OJ 1992, 22) the board held that an effect (in this case, growth regulation) not previously described, but actually occurring during the execution of a known teaching (in this case, use as a fungicide) and intended as the basis of a use invention, had in any event not been made available to the public if it was not revealed so clearly during such execution as to disclose the invention's essential character, at least potentially, to an unlimited number of skilled persons.

In many cases the ability to recognise a technical teaching such as the internal structure or composition of a product in prior use presupposes analysis of the product embodying this technical teaching. Whether it is technically feasible to analyse a product that is available on the open market is an issue that the boards have considered on a number of occasions.

In **T 461/88** (OJ 1993, 295) the board ruled that a control program stored on a microchip had not been made available to the public if the analysis of the program would require an expenditure of effort on a scale which could only be reckoned in man-years and if, for economic reasons, it was highly improbable that the sole purchaser of the machine controlled by the program had carried out such an analysis (see also the similar ruling in **T 969/90** *obiter dictum*).

In **T 390/88** the board rejected the argument that a film had not been made available to the public because its existence had only been announced at a press conference three weeks before the priority date, and hence it would have been impossible in that short time for a person skilled in the art to determine the film's composition.

## *Novelty*

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In **T 406/86** (OJ 1989, 302) the composition of a product that had been commercially available before the priority date was held to have become part of the state of the art because it could be analysed without undue burden. In **T 969/90** and **T 953/90** the board had ruled that the internal structure of a product in prior use had been made available to the public because a skilled person relying on the normal means of investigation available to him would have been able to analyse the product.

In **G 1/92** (OJ 1993, 277) already mentioned above the Enlarged Board of Appeal held that, "Where it is possible for the skilled person to discover the composition or the internal structure of the product and to reproduce it without undue burden, then both the product and its composition or internal structure become state of the art."

In **T 952/92** (OJ 1995, 755) the board held that prior use of a product provided access to what the skilled person would be able to ascertain from that product by means of known analytical techniques. Whether such an analysis could be performed without undue burden was irrelevant to the question of whether the composition of a product had been made available to the public. In giving its reasons the board stated that the original English of **G 1/92** (OJ 1993, 277) was not entirely clear in terms of grammar, since the phrase "without undue burden" could qualify just the reproduction of the product, or both the discovery of its composition or internal structure and its reproduction. The reference to "without undue burden" was not strictly necessary in order to provide an answer to the referred questions and could not therefore have been intended to alter or add to the existing law concerning what constitutes "the state of the art". Reproducing a product "without undue burden" was a problem associated with Art. 83. Furthermore, to apply the concept of "undue burden" would introduce a subjective element into the determination of novelty, something which the Enlarged Board had specifically sought to reject in **G 1/92**.

A further question considered by the board was whether, if the composition of a product in prior use was to be "made available", a complete analysis of such product had to be possible, so that, as submitted by the patent proprietor, such product could have been exactly reproduced. In the board's view, a claimed invention was anticipated by the prior use of the product, if an analysis of a product using available analytical techniques was such as to inform the skilled person of an embodiment of the product which fell within the claim of the patent.

In **T 472/92**, the problem to be solved by the subject-matter of the patent in suit was the provision of a laminate suitable for the fabrication of sleeves which could be heat-shrunk onto bottles, where the outer surface of the laminate should have a good printability. This problem was solved, according to the patent in suit, by the use of polystyrene. A further element of the solution was the manufacture of the two layer laminate by coextrusion. The appellant/opponent contended that coextruded polystyrene laminates had been delivered to a customer and that a skilled person would have been aware of their good printability and encouraged to replace, in the laminates known in the state of the art, the ethylene polymer composition based non-cellular layer by a non-foam layer made of polystyrene. The board referred to **G 1/92** point 3 and concluded that the printability characteristic of the material was not a property that became available to the public by their mere delivery, since this was clearly an extrinsic characteristic requiring interaction with specifically chosen outside



I.C.2. Determining the content of the relevant prior art

conditions. Thus, such characteristic could not be considered as already having been made available to the public (see also **T 267/92**).

In case **T 301/94**, the patent concerned green glass bottles with a high filtering power for ultraviolet light and having a defined composition. It was proved that bottles with the claimed characteristics had been sold and delivered by the respondents (opponents) to a customer before the priority date. The appellants contended that the bottles produced of glass of said composition by the respondents had not been made available to the public, *inter alia* for the following reasons:

1) the sulphide concentration of the glass was a secret or a "hidden" feature within the meaning of decisions **G 1/92** and **G 2/88**, since it was not common general knowledge at the priority date that a green glass having a high UV absorption might contain a very low amount of sulphides. Thus, when analysing such a glass the skilled person would not have paid attention to the sulphide concentration, high sulphide concentrations being known only in connection with amber glass; 2) a skilled person would not have been able on the basis of what was generally known on the priority date to reproduce the green glass without undue burden because a tremendous number of experiments would have been necessary to find out the temperature and the reducing conditions leading to the desired optical properties by continuous production in an industrial plant.

The board held that the optical parameters represented intrinsic characteristics of the glass composition and not characteristics depending on a particular use or application of the glass. The situation considered by the Enlarged Board in decision **G 2/88** was different from that of the case on issue, since it concerned a claim relating to a new use of a known compound reflecting a newly discovered technical effect and not a claim to the compound itself. It was the new technical effect which constituted a hidden or secret feature, not the composition itself or one component thereof. Furthermore, the board held that the appellants in fact introduced an additional requirement for the chemical composition to be available to the public, i.e. that the skilled person should be able to recognize *a priori*, on the basis of the common general knowledge at the priority date, which components the commercially available product might contain and in which amounts. Such an additional requirement would not be in agreement with the essence of opinion **G 1/92**, where only analysability and reproducibility of the commercially available product were required for its chemical composition to be state of the art. Furthermore, the board held that the skilled person would have been able to reproduce the green glass without undue burden and that this was sufficient to meet the requirement of reproducibility set out in **G 1/92**. What was required in **G 1/92** was not that continuous production on an industrial scale be possible without undue burden, but that a skilled person be able to prepare the product without undue burden on the basis of his general technical knowledge and knowing the composition or internal structure of the product, whatever the scale of production (laboratory, pilot or industrial scale).

In **T 515/98** the invention related to an epilation device. The proceedings involved *inter alia* a claim of prior use.

The board ruled that any prior use had to be considered as a whole, just as parts of a prior-art document could not be taken out of context so as to arrive at different technical information

from its teaching as a whole. Here too, certain components regarded as essential to a device's basic design for normal use as intended by the manufacturer could not be omitted.

In the present case, the prior-use epilation device - as even the appellant/opponent conceded - exhibited all the features of Claim 1 only if certain essential components were omitted, thus changing the kinematics of its operating elements.

In the board's view, the appellant thus implicitly acknowledged that the device as marketed was not identical with that according to the invention; what was identical with the latter was a modified version, newly constructed using only some of the original components, so that the epilation elements in the two versions differed as regards both structure and kinematics. Since, in order to move from the prior-use device to the one according to the invention, the skilled person had to perform several acts (dismantling the marketed device, omitting components, partial reconstruction) which would not arise from normal use of the device on sale, the subject-matter of Claim 1 was not directly and unambiguously derivable from the prior teaching.

## **2.9 Broad claims**

In **T 607/93** the board decided that when novelty and inventive step were being assessed, there was no reason for using the description to interpret an excessively broad claim more narrowly if it was a question not of understanding concepts that required explanation but rather of examining an excessively broad request in relation to the state of the art.

## **2.10 Mistakes in a disclosure**

Mistakes in a document do not in themselves constitute prior art such as to prevent grant of a patent.

In **T 77/87** (OJ 1990, 280) the abstract published in the journal "Chemical Abstracts" did not correctly reproduce the original paper. The board stated that the original document was the primary source of what had been made available as a technical teaching. Where there was a substantial inconsistency between the original document and its abstract, it was clearly the disclosure of the original document that had to prevail. The disclosure in the original document provided the strongest evidence as to what had been made available to the skilled person. When it was clear from related, contemporaneously available evidence that the literal disclosure of a document was erroneous and did not represent the intended technical reality, such an erroneous disclosure should not be considered part of the state of the art.

In **T 591/90** a prior document again contained mistakes. The board distinguished this case from **T 77/87** (OJ 1990, 280), which had concerned a special case, and took the view that a document normally formed part of the prior art even if its disclosure was deficient. In evaluating such a disclosure it was to be assumed however that the skilled reader was mainly "interested in technical reality". Using his general technical knowledge and consulting the reference literature, he could see at once that the information in question was not correct. It could be assumed that a skilled person would try to correct recognisable errors, but not that he would take the deficient disclosure as pointing the way towards a solution to an existing

technical problem.

In **T 412/91** the board took the view, having regard to Art. 54 EPC, that the incorrect teaching of document (1) was not comprised in the state of the art. It stated that, in principle, what constituted the disclosure of a prior art document was governed not merely by the words actually used in its disclosure, but also by what the publication revealed to the skilled person as a matter of technical reality. If a statement was plainly wrong, whether because of its inherent improbability or because other material showed that it was wrong, then - although published - it did not form part of the state of the art. Conversely, if the skilled person could not see the statement was wrong, then it did form part of the prior art.

In **T 89/87** the board found that "0.005 mm" (= 5 nm) was a misprint contained in the prior document and that only "0.0005 mm" (= 0.5 nm) was correct. The board stated that the correction was such that the skilled reader would be expected to make it as a matter of course.

### **2.11 Accidental disclosure**

In **T 161/82** (OJ 1984, 551) the board found that the prior art document was concerned with the solution of a problem totally different from that stated in the application at issue and concluded that in cases where an anticipation was of a chance nature, in that what was disclosed in a prior document could accidentally fall within the wording of a claim to be examined for novelty without there being a common technical problem, a particularly careful comparison had to be made between what could fairly be considered to fall within the wording of the claim and what was effectively shown in the document (see also **T 986/91**).

In **T 601/92** a radial ventilator was claimed, characterised in that the ventilator wheels were mounted on the ventilator shaft and offset against each other in such a way that the spokes of one ventilator wheel, viewed in the direction of the axle, were arranged opposite the gaps between the spokes of the other ventilator wheel. The prior art comprised fans, during the assembly of which no attention was paid to the angle of rotation of the spokes of the two ventilator wheels in relation to each other. The probability that such fans, which coincidentally had the spoke arrangement claimed, had been sold was extremely high. The board held that this was evidence of an anticipatory prior use of the claimed product, stating that in the case of anticipation of a chance nature where there was no common technical problem, particular care had to be taken when considering what could be deemed to be part of the claim and what was derived from the prior publication. In contrast to **T 161/82** (OJ 1984, 551), in which the claimed subject-matter was also structurally the same as the prior subject-matter, but had a different function, there was no recognisable difference in function in this case. **T 208/88** (OJ 1992, 22) was not comparable since in the present case a product was claimed and not a new possible use for a known substance based on a previously unknown effect or function of that substance. The auxiliary request related to a process for manufacturing low-noise radial ventilators, characterised in that the ventilator wheels were systematically mounted on the ventilator shaft and offset against each other in such a way that the spokes of one ventilator wheel, viewed in the direction of the axle, were arranged opposite the gaps between the spokes of the other ventilator wheel. In the board's view this claim was clearly delimited from the prior art by the feature "systematically". This feature clearly referred to a

procedural step and could acquire significance as a substantial distinguishing feature vis-à-vis the prior art only within a process claim. The fact that the claim for a manufacturing process contained predominantly product features was a logical consequence of the close connection between product and process and did not prevent the claim from being allowed.

In **T 608/96**, the board ruled that a disclosure was "accidentally novelty-destroying" if it would not be considered by the skilled person faced with the problem underlying the application or patent, whether because it belonged to a distant technical field or because its subject-matter suggested it would not help solve the problem. This also meant that a disclosure was "accidentally novelty-destroying" only if completely irrelevant for assessing inventive step.

## **2.12 Reproducibility of the content of the disclosure**

A disclosure is novelty-destroying only if the teaching it contains is reproducible.

In **T 206/83** (OJ 1987, 5), in particular, it was found that a document (in this case a copending European application) did not effectively disclose a chemical compound, even though it stated the structure and the steps by which it was produced, if the skilled person was unable to find out from the document or from common general knowledge how to obtain the required starting materials or intermediates. Information which could only be obtained after a comprehensive search was not to be regarded as part of common general knowledge. This need for an enabling disclosure was also in conformity with the principle expressed in Art. 83 EPC for patent applications which had, accordingly, to "disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art". The requirements as to the sufficiency of disclosure were, therefore, identical in all these instances.

For selection inventions (see p.72 et seq.) the requirement of a reproducible disclosure also plays a significant role. In **T 26/85** (OJ 1990, 22) the board pointed out that anything comprised in the state of the art could only be regarded as having been made available to the public in so far as the information given to the person skilled in the art was sufficient to enable him to practise the technical teaching which was the subject of the disclosure, taking into account also the general knowledge in the field to be expected of him. In this particular case, the ranges of a certain parameter as defined in the claim fell within the broader ranges stated for the same parameter in a prior art document. According to the above-mentioned conclusion, the board considered that a realistic approach when assessing the novelty of the invention under examination over the prior art in a case where overlapping ranges of a certain parameter existed would be to consider whether the person skilled in the art would, in the light of the technical facts, seriously contemplate applying the technical teachings of the prior art document in the range of overlap; if it could be fairly assumed that this would be the case, it had to be concluded that no novelty existed. Such was not the case in the matter under consideration, since there existed in the prior art a reasoned statement clearly dissuading the person skilled in the art from using the range under a certain value, and the range of overlaps was under this value; the claimed range was therefore considered novel.

In **T 447/92** the board held that the cited document did not disclose when or how far a movable piece in the claimed invention (an air circuit breaker) moved, or the way in which it

worked to prevent the spring-back of a lever. No relative movement was described or shown in the drawings and it was a matter of conjecture as to the manner in which the relevant parts co-operated. The board found that it might have been obvious to a skilled person that the notch could co-operate with the shaft in the manner defined in the claims of the patent in suit, but that this only meant that the disclosure took him close enough to do the rest himself. It did not mean that the document took the skilled person all the way to the present invention. Thus, the features of the air circuit breaker according to claim 1 of the application were not unambiguously derivable from the drawings of an earlier European patent application.

In **T 310/88** the board of appeal had to consider a discrepancy between what actually happened in practice when carrying out a technical teaching in a prior document according to the letter of its description, and what this prior document said would happen. According to the description in the prior document a particular component was not present, whereas the presence of this component was essential for the later invention. However, in practice, when following the teaching of the prior document literally, this component would be present. The board held that the invention was novel over the prior document because the latter did not contain a sufficiently clear teaching for that conclusion not to be reached. The skilled person, by following the document's teaching, was led in a direction clearly pointing him away from the claimed subject-matter because it stated that the composition obtained did not comprise a component contained in the claimed compound. The subject-matter was new even if by reproducing the examples described in the prior document a skilled person would inevitably obtain a composition corresponding to the composition claimed and comprising the specific component. According to the board, the teaching of the prior document had to be interpreted as meaning that further steps would be needed to eliminate the additional component.

In **T 491/99**, the board held that an earlier patent using terminology which at first sight was suggestive of the product invention claimed was not in fact a prejudicial disclosure if a skilled person could actually make the product in question only later, from the process and machine described for the first time in the European patent in suit.

### **3. Ascertaining differences**

Once the state of the art has been established using the criteria described above, and its content has been determined, the final step is to ascertain whether the invention in question differs from the prior art.

#### **3.1 Comparing each individual item from the prior art**

When the invention is compared for novelty purposes with the state of the art as determined applying the criteria described above, this must be done only on the basis of each element of prior art taken as a whole (see **T 153/85**, OJ 1988, 1; **T 124/87**, OJ 1989, 491; **T 233/90**; **T 904/91**).

If however there is a specific reference in one prior document (the "primary document") to a second prior document, when construing the primary document (ie determining what it means to the skilled person) the presence of such a specific reference may necessitate part or all of the disclosure of the second document being considered as part of the disclosure of the

## *Novelty*

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primary document (see **T 153/85**, OJ 1988, 1; **T 645/91**; **T 942/91**; **T 422/92**; **T 239/94**).

In **T 291/85** (OJ 1988, 302) the board noted that the disclosure in a prior publication always included not only what it presented as the teaching of the invention but also what it referred to as the prior art. In the board's view, however, when examining for novelty, to read into an account of the state of the art couched in very general terms specific details of the inventive teaching of the same document was permissible only where a person skilled in the art would in fact have made this combination when reading this document. This would, for instance, be the case if a source were to be cited for the prior art described and a specific, relevant disclosure could be derived from the original document, or if the description of the prior art referred directly to the appropriate passage in the description of the invention. Combining a specific feature from the description with the general description of the prior art in this way might in certain circumstances be obvious to a skilled person merely in the light of his general technical knowledge. In the absence of such or similar circumstances, however, one could not, in the board's view, assume that a skilled person would necessarily have derived from the document a teaching based on a combination of this kind. Thus, the board concluded that if a citation gave detailed information about a further development of a prior art described only in very general terms without quoting a specific source, it was not permissible in examining for novelty to combine these general statements with the specific statements made solely in order to explain the said development unless a person skilled in the art would have made the combination when reading the citation.

In **T 288/90** the appellants contended that the alleged invention lacked novelty on the basis of a document (I), read either on its own or in association with a document (12) treated as being representative of the general technical knowledge of the skilled reader of document (I). The board regarded document (12) per se as fairly representative of the general technical knowledge available at the relevant time, as it was published only fifteen months before the application date of document (I). The board observed that, although for the purposes of assessing novelty it was not normally legitimate to read two documents together, nevertheless, when interpreting a single document, it was necessary to read it having the general technical knowledge in mind, and for this purpose to look at representative technical literature as an aid to the correct interpretation of any particular term of art encountered.

In **T 866/93** the board had to decide whether the invention was anticipated by Document 1. The section of Document 1 relating to the prior art which the invention sought to improve on made reference to another document (Document 16) which was not cited in the descriptive part of the claimed invention.

The board held that, whilst the actual contents of a document (the "primary" document) might encompass the contents of another document (the "secondary" document), any reference in the primary document to the secondary document nevertheless had to be made in the appropriate context.

In decision **T 56/87** (OJ 1990, 188) the board emphasised that the technical disclosure in a document should be considered in its entirety, as it would be by a person skilled in the art, and that there could be no justification for arbitrarily isolating parts of the document in order to derive therefrom an item of technical information which would be distinct from or even

contradict the integral teaching of the document. Therefore, the board considered that a particular feature relating to the positioning of the outer electrodes of a transmission ion chamber, in such a way that they partially lay in the shadow of a collimator, for implementing a process for correcting alignment errors of a divergent beam of rays, was not disclosed in a prior art document which, however, contained a figure in which such positioning could be identified. The reason was that the figure in question was obviously a schematic illustration showing neither the proportions nor the dimensions of the actual apparatus. In order to be able to interpret it correctly, the skilled technician therefore had to refer to the other figures and to the written description of the document; he would have deduced from the latter, however, that the outer electrodes should be positioned entirely in the radiation field, and not partially in the shadow of the collimators, as set out in the claims examined (see **T 332/87**, **T 441/91** and **T 657/92**).

### **3.2 Distinguishing features**

In **T 4/83** (OJ 1983, 498) the board held that when examining for novelty, it should be taken into consideration that any information in a patent specification which conveyed to the person skilled in the art a technical teaching, belonged to the content of the disclosure irrespective of whether or not it fell within the scope of the claims or what purpose it served.

#### 3.2.1 Difference in wording

In **T 114/86** (OJ 1987, 485) the board held that a mere difference in wording was insufficient to establish novelty (see **T 12/81** (OJ 1982, 296), **T 198/84** (OJ 1985, 209) and **T 248/85** (OJ 1986, 261)). In **T 565/90** the appellant submitted that only preferred ranges or examples amounted to a technical disclosure destructive of novelty, and that generic ones could not anticipate the more specific teaching of the patent in dispute. The board did not agree and confirmed earlier case law that the definition of an invention which differed from the prior art only in its wording was insufficient to establish novelty. The board stated that what had to be established was whether or not the state of the art made the subject-matter of the invention available to the skilled person in the form of a technical teaching.

In **T 917/94** the board stated that incorporation of a technical feature which is redundant because it does not change the claimed subject-matter does not impart novelty to known subject-matter.

In **T 826/94** the board was of the opinion that a claimed measuring device, which showed all the constructive features of a known measuring device and differed from the latter only in name, ie in the dimensions to be measured, was novel within the meaning of Art. 54 EPC if it was only at the level of abstract thought, when the basic principles of the two measuring devices were compared with each other, that the conclusion could be drawn that the two measuring instruments were of the same type.

In **T 870/95** it was decided that the **general term "base"** used in the citations was novelty-destroying of the more specific one "permanganate in aqueous solution" if it were shown that in the light of the skilled person's general technical knowledge the former could only be understood to mean the latter.

In **T 79/96**, an extract from an handbook (D1) disclosed all the features of the claim 1 of the patent in issue apart from the use of a "countercurrent gas/gravity classifier". Thus, with respect to novelty it only had to be decided whether a vibrating fluidized bed with an upwards gas flow through the bed of particles as described in D1 should be regarded as a countercurrent gas/gravity classifier. The definition of a countercurrent gas/gravity classifier was given in an extract from another standard handbook on chemical technology (D3). The proprietor of the patent was of the opinion that the definition given in D3 was too broad and that a person skilled in the art would not consider a fluidized bed, being a rather inefficient classifier, as a countercurrent gas/gravity classifier.

The board did not share this view. It held that when assessing novelty of the claimed subject-matter an expression in a claim should be given its broadest technically sensible meaning. On that basis, any gas/gravity classifier, including a fluidized bed, satisfied the classification requirements of the claim 1 of the patent on issue. The subject-matter therefore lacked novelty over D1.

### 3.2.2 Differences in values

In **T 686/96** claim 1 related to a composition with a feature (iv) requiring a perspex<sup>®</sup> abrasion value (PAV) in the range from about 12 to about 20 PAV. A prior art document disclosed in example 2 a composition having features (i) to (iii) of claim 1. With respect to novelty it had to be decided whether the known composition also had an abrasion value as required by feature (iv) of claim 1. The board established that the abrasion value of the known composition was somewhat below the lower value indicated in feature (iv) of the claim. Since the lower limit in the claim 1 was defined as "about 12", some interpretation was necessary. The board held that, when deciding on the novelty of the subject-matter of a claim, the broadest technically meaningful interpretation of a claim should be taken into account. In the board's view the scope of claim 1 was to be construed to mean that the indicated lower limit corresponded to the value disclosed in the prior art. Claim 1 was then considered to lack novelty.

In **T 262/96**, regarding the issue of novelty, the appellant/opponent contended that the ZN40 material was commercially available before the priority date and that these products had the composition, microstructure and properties indicated in claim 1 of the patent in suit. The silica content of this sample of ZN40 material was lower than the lower limit of 0.05 wt% stated in claim 1 of the patent in suit. The appellant's argument that the difference between the said numerical values was only 0.007, and thus not significant, was not convincing for the board. As the silica content of this ZN40 material was itself relatively low, this difference represented in fact 16%. A difference of 16% in the silica content was sufficient to distinguish two products from each other if such low silica contents could be determined with sufficient accuracy by the method of measurement used. The appellant did not provide information about the standard deviation or the degree of accuracy of the method used. Instead, he argued at the oral proceedings that the value of 0.043 wt% was in fact lower than the actual value since the analysis was effected on the sintered body and such an analysis was more problematic than an analysis performed on the starting powder because of the additional components formed during sintering. In the board's view the fact that an analysis might be more difficult on the sintered product did not mean that the result of the analysis was necessarily too low.



Furthermore, the appellant's affirmation that the silica content measured in the sintered body was lower than the actual value was not supported by evidence and was contested by the respondent. If it were to be assumed for the sake of argument that the value given for ZN40 was too low, then the appellant would still have had to prove that the actual value lay within the claimed range of 0.05 to 0.5 wt%. Evidence to this effect was not provided by the appellant, although the burden of proof rested with him. In these circumstances, the board considered that, in the absence of evidence to the contrary, the silica content disclosed lay outside the claimed range and would not destroy the novelty of the claimed ceramic bodies.

### 3.2.3 Difference in composition

In **T 80/96** (OJ 2000, 50), claim 3 of the main request read as follows: "Preparation containing L-carnitine in the form of tablets, capsules, powders or granules, in particular for external application, characterised in that it contains L-carnitine-L-tartrate with an auxiliary substance or auxiliary substances and, possibly, one or more further active agents." An aqueous solution of the claimed tartrate compound was described in the prior art. The board held that, in the case of an active agent which was known as such to be water-soluble, it was clear to a person skilled in the art that describing and claiming the active agent as a solution did not add to or change the definition of that active agent. Without further specification, the mere characterisation of a solvent or diluent as liquid or solid in a claim did not change the assessment of the novelty of the subject-matter of the claim.

Analogously, in a claim directed to a preparation of a known structurally defined active agent with at least one auxiliary substance, in which the feature "with an auxiliary substance or auxiliary substances" meant that something was added to the active agent, the admixture of an unspecified auxiliary substance could not, in view of the unlimited number of substances which might enter into consideration, be deemed a substantive and distinctive addition to the active agent, unless this feature, which was necessary if novelty was to be recognised, was specified in such a way that a person skilled in the art could recognise what it was that should be added to the active agent. The claim was therefore not new.

### 3.2.4 Inevitably obtained products

In **T 270/97** the claimed product was considered by the opposition division and the respondent/opponent as anticipated by the agent produced and inevitably obtained by repeating Examples 1 and 2 of a prior-art document.

The board however found that the method disclosed in the text of Example 2 implied a way of acting not envisaged in the method according to the patent in suit. The parties' attempts to show that the particles obtained according to Example 2 were, or were not, identical to the products of the patent in suit, produced highly contradictory results. Therefore the board could only conclude that depending on experimental conditions not disclosed in Example 2 different products might be obtained. Thus the claimed product was not inevitably obtained by following the method of Example 2. As to Example 1, the board found that it did not disclose an essential feature of the method of making the product of the patent in suit. Under these circumstances, it was not tenable to argue that the product according to the patent in suit was the inevitable result of repeating Example 1.

### 3.2.5 Functional features

Likewise, in **T 500/89** it could only be seen from the disclosure considered in its entirety that the prior art document did not cause lack of novelty, because the method constituting the closest prior art differed from the claimed method in one functional characteristic. The disputed patent related to a method for the production of photographic material by the simultaneous application of several layers of fluid photographic coating materials. Although the document cited in support of the opposition listed the numerical ranges for layer thickness, viscosity, coating speed, etc. used in the method claimed, the latter was nevertheless held to be new because the cited document described the choice of these numerical ranges as leading to intermixing between two particular layers. The contested patent was to be assessed according to a different criterion because it described the application of the layers as being "substantially free from intermixing". The "intermixing" described as an objective in the citation was not merely a stated purpose not constituting one of the technical features of the method described, but a functional feature - a criterion, in effect - forming an essential element of the teaching set out in this publication.

### 3.2.6 Generic disclosure

In **T 651/91** the board cited the Guidelines C-IV, 7.4 with approval, confirming that a generic disclosure did not normally take away the novelty of any specific example falling within that disclosure. The board further added that a disclosure could be generic even where it only left open the choice between two alternatives. In **T 508/91** the board, citing the same paragraph of the Guidelines, held that, on the other hand, the prior disclosure of the subset "vegetables" took away the novelty of the wider set "fruits and plants".

### 3.2.7 Product claim with process features

In **T 815/93** and **T 141/93**, the claims comprised both product features and features for a process for manufacturing the product. In both cases, only the process features distinguished the invention from the prior art. Following the case law on the novelty of product-by-process claims, the board found that process features not previously described could establish the novelty of the claimed product only if they caused it to have different properties from the products previously described. Neither the patent proprietor in the first case nor the applicant in the second case could demonstrate this.

## **4. Chemical inventions and selection inventions**

The state of the art often includes documents containing technical teachings described in general terms; these teachings in turn subsume a number of more specialised technical teachings. In assessing the novelty of subject-matter that can be subsumed under a general term in the state of the art, the question arises whether the general term makes the claimed matter fully or partially accessible to the public. In other words, it has to be established whether the general term used in the citation discloses the subject-matter defined by the special term in the claim. The prior-art disclosure needs to be ascertained especially carefully in such cases. General terms of this kind occur particularly frequently in the chemical literature, which is why the relevant case law usually relates to this field. There are two types

of case here:

(a) assessing the novelty of chemical substances and groups of substances in respect of general formulae (Markush formulae) under which they fall (see below, Chapter I.C.4.1), and  
(b) assessing the novelty of products or processes defined by parameter ranges as against known products or processes characterised by wider or overlapping parameter ranges (see below, Chapter I.C.4.2).

These types differ mainly in technical terms, but the same patent-law principles apply to both. For this reason the boards of appeal have always been able to adopt the same approach to questions of this nature.

#### **4.1 Novelty of chemical compounds and groups of compounds**

**T 12/81** (OJ 1982, 296) is a decision of fundamental importance as far as novelty in the field of chemistry is concerned and is referred to time and again in the case law of the boards of appeal. It states that the teaching of a cited document is not confined to the detailed information given in the examples of how the invention is carried out, but embraces any information in the claims and description enabling a person skilled in the art to carry out the invention. If a product cannot be defined by a sufficiently accurate **generic formula**, it is permissible to make the definition more precise by additional product parameters such as melting point, hydrophilic properties, NMR coupling constant or the method of preparation (product-by-process claims). From this it necessarily follows that patent documents using such definitions will be prejudicial to the novelty of later applications claiming the same substance defined in a different and perhaps more precise way. Decision **T 12/81** related to such a case. The board summarised that in the case of one of a number of chemical substances described by its structural formula in a prior publication, the particular stereo-specific configuration of the substance - though not explicitly mentioned - was disclosed in a manner which caused lack of novelty, if it proved to be the inevitable but undetected result of one of a number of processes adequately described in the prior publication by the indication of the **starting compound** and the **process**.

The applicant argued that the novelty of the claimed product was based on a selection. The starting substance was chosen from a list of 20 compounds and combined with one of the five alternative process variants. The board did not share this view, but used the opportunity to comment on this argument and develop **criteria for selection inventions** that have frequently been adopted in later decisions:

- A substance selection can come about if an unmentioned compound or group of compounds having a formula covered by the state of the art is found, in the absence of any information as to the starting substance or substances. The subject-matter in the case in question, however, did not involve a selection of that kind in an area which, although marked out by the state of the art, was nonetheless virgin territory.

- However, the disclosure by description in a cited document of the starting substance as well as the reaction process is always prejudicial to novelty because those data unalterably establish the end product.

## Novelty

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- If, on the other hand, two classes of starting substances are required to prepare the end products, and examples of individual entities in each class are given in two lists of some length, then a substance resulting from the reaction of a specific pair from the two lists can nevertheless be regarded for patent purposes as a selection and hence as new.

The board held that the combination between starting substances and process variants, however, was quite a different matter from a combination of two starting substances and thus not comparable. At its simplest, if the starting substances were regarded as fragments of the end product, then every conceivable combination of a given starting substance in the first list with any starting substance in a separate second list of additionally required starting substances involved a true substantive modification of the first starting substance, since in every combination it was supplemented by a different fragment of the second starting substance to become a different end product. Each end product was thus the result of two variable parameters.

However, combining a given starting substance from a list of such substances with one of the methods of preparation given did not result in a real substance alteration of the starting substance but only an "identical" alteration. In the case in question, for example, no matter which of the processes described in detail was used, the end product was always the particular starting substance's hydrogenation product, which differed from the starting substance itself only in that it contained two additional hydrogen atoms. The process parameter was thus - seen in terms of the end product - not a variable parameter that would result in an immense widening of the range of possibilities, so that precisely in this case the end product was not the result of two variable parameters.

### 4.1.1 Anticipation of certain compounds

#### (a) Definition of a substance by its structural formula or other parameters

In **T 12/81** (OJ 1982, 296) the board stated (see above, I.C.4.1) that it is permissible to make the definition of a chemical substance more precise by additional product parameters such as melting point, hydrophilic properties, NMR coupling constant or product-by-process claims if it cannot be defined by a sufficiently accurate **generic formula**. From this it necessarily follows that patent documents using such definitions will be prejudicial to the novelty of later applications claiming the same substance defined in a different and perhaps more precise way.

In **T 352/93** it was decided that a claim for an ionic compound (salt) that was defined only by structural parameters, ie the structural formulae of the cation and anion of the compound, was not novel over prior art disclosing an aqueous solution that contained a base corresponding to the cation and an acid corresponding to the anion.

In **T 767/95** the patent related to purified interleukin-1 having a specified molecular weight, a specified pI and a specified amino acid sequence. The appellant/opponent could not show that the substance disclosed in prior art document (1) and the claimed interleukin-1 were the same protein. The board stated (a) that there were differences as to the molecular weight, (b) that a comparison between the pI's of the substance described in document (1) and the

claimed substance was not possible under the given circumstances, and (c) that document (1) suggested a mixture of proteins. The semipurified nature of the preparation of document (1) was confirmed by statements in the scientific literature. There was thus a blockage preventing the skilled person from sequencing the material of document (1). Regardless of whether it arose from the semipurified nature of these preparations or from the process yielding only traces of the protein, this blockage prevented the teaching of document (1) from making available to the public a protein having the amino acid sequence specified in the patent in suit. In conclusion, since there was no evidence before the board that the material of document (1) exhibited the features of claim 1 of the patent in suit, this document did not affect the novelty of the purified interleukin-1.

(b) Selection of starting substances from different lists

In **T 401/94** the board again adopted one of the criteria for selection inventions laid down in decision **T 12/81** (OJ 1982, 296), namely, that if two classes of starting substances were required to prepare the end products, and examples of individual entities in each class were given in two lists of some length, the substance resulting from the reaction of a specific pair from the two lists could be regarded for patent purposes as a selection and, hence, as new. The board applied the above criterion to the case in question and stated that although **T 12/81** concerned the synthesis of a chemical product, whereas the case in question involved the preparation of a **mixture**, the claimed subject-matter was defined on the basis of two chemical entities, each of which had been selected from a list of compounds. Hence the criteria defined in **T 12/81** were applicable in this case. By analogy, the board held that in this case the claimed composition had to be viewed as a selection, and therefore as novel, as it corresponded to a specific combination of constituents, each of which had been selected from a relatively long list. The board therefore concluded that there had been no implicit disclosure of the mixture of these constituents.

In **T 427/86**, the prior document described a process of synthesis characterised on the one hand by the starting substances and on the other by the catalytic system comprising the metal constituent and the catalytic promoter; taking into account the number of alternatives in the list of metal constituents and list of promoters in this document 36 different catalytic systems could be contained. The invention claimed aimed at improving the operation of the catalytic system. It comprised the selection of a very small number of alternatives (one and two respectively) from the list of metal constituents and list of promoters according to the prior document, the combination of which was not mentioned anywhere in the latter. The board was of the opinion that a substance resulting from the reaction of a specific pair from the two long lists was for patent purposes a selection and could be regarded as new because this specific combination chosen from the wide range of possibilities had not been disclosed by the citation. The board added furthermore that in view of the earlier decision **T 198/84** (see I.C.5.2.1), an objective reading of the prior art document suggested constituents of the catalytic system different from the claimed ones. Therefore, the claimed components were not implicitly disclosed. The board concluded that the condition of novelty had been satisfied.

In **T 366/96** the patent related to a detergent composition comprising a peroxidase, hydrogen peroxide, and a surfactant. Prior art document (12) disclosed a detergent composition comprising surfactants, enzymes and a bleaching agent. In the list of suitable enzymes,

peroxidases were mentioned. The list of suitable bleaching agents comprised, i. a., inorganic peroxide.

The board found that document (12) taught a detergent composition comprising a peroxidase and a bleaching agent. As was generally known in the art, peroxidases act on hydrogen peroxide as a substrate. This implied that if the presence of peroxidases was specified, there would also be the simultaneous presence of hydrogen peroxide. In other words, even if one were to accept for the sake of argument that in document (12) the peroxidase on the one hand was enumerated in one list (i.e. that of the enzymes) and the hydrogen peroxide was mentioned in another list (i.e. that of the bleaching agents), to arrive at the compositions of the patent in suit would not require a "twofold" selection from two lists which could render the resulting combination of features novel. On the contrary, as soon as a person skilled in the art contemplated a detergent composition containing peroxidase, he or she must also contemplate the hydrogen peroxide precursors also disclosed in document (12) in order to ensure the supply of the necessary peroxidase substrate hydrogen peroxide. It was not comparable to a "twofold" selection which could render a resulting combination novel if compelling technical necessities made a particular second component mandatory as soon as the first component was chosen.

(c) Selection on the basis of a general formula

Prior-art disclosure is also of key importance here. In **T 181/82** (OJ 1984, 401) the board confirmed that the products of processes which were the inevitable result of a prior description of the starting materials and the process applied thereto belonged to the state of the art. This was true even if one of the two reactants manifested itself as a chemical entity (C<sub>1</sub> alkyl bromide) from a group of generically defined compounds (C<sub>1</sub> - C<sub>4</sub> alkyl bromides). The board took the view that the description of the reaction of a certain starting material with C<sub>1</sub> to C<sub>4</sub> alkyl bromides disclosed only the C<sub>1</sub>-substituted product, and was not prepared to recognise the disclosure of a particular butyl substituent on the grounds that four isomeric butyl radicals existed.

In **T 7/86** (OJ 1988, 381) the board also based its reasoning on **T 12/81** (OJ 1982, 296), stating that the principle that a substance resulting from the reaction of a specific pair from two lists could nevertheless be regarded as new was applicable not only for starting substances in chemical reactions but also for polysubstituted chemical substances where the individual substituents had to be selected from two or more lists of some length, such as in the case in question.

Following on from **T 181/82** (OJ 1984, 401) it was stated in **T 7/86** that if a class of chemical compounds precisely defined only in structural terms (by a chemical reaction) and with only one generically defined substituent, did not represent a prior disclosure of all the theoretical compounds encompassed by an arbitrary choice of a substituent definition, this clearly also had to be the case for a group of chemical substances, the general formula of which had two variable groups. Therefore, a class of chemical compounds, defined only by a general structural formula having at least two variable groups did not specifically disclose each of the individual compounds which would result from the combination of all possible variants within such groups.

In **T 258/91** the case concerned a selection from two lists of starting compounds. The compound (formula VI) cited as taking away novelty from the patent in suit differed from the claimed compound (formula I) by the methyl residue on the amino group in the 4-position. In the board's judgment, the information in the cited document was not sufficient to disclose the compound of formula I to the skilled person in the form of a concrete, reproducible technical teaching. The board found that the cited document did not contain any teaching involving the modification of the compound, which was mentioned only by way of example. What was being taught was merely the preparation of a class of compounds and not of a specific, individual compound.

In **T 658/91** the board held that the case law did not suggest that a chemical compound was deemed to be specifically disclosed only if that compound was mentioned by name or even described in an example. On the contrary, it was sufficient if the compound could be unambiguously identified as envisaged in individualised form in the document in question, since the purpose of Art. 54(2) EPC was to exclude the state of the art from patentability.

#### 4.1.2 Novelty of groups of substances

The case law on the novelty of generically defined compounds and particular examples of these was summarised in decision **T 12/90**. The board had to consider the novelty of a vast family of chemical compounds defined by a general structural formula, where the prior art also disclosed a vast family likewise defined by a general structural formula, the two families having a large number of products in common.

The board pointed out that a distinction had to be drawn between two situations:

(a) if the subject-matter of the invention was a particular compound, whereas the prior art disclosed a family of compounds defined by a general structural formula including this particular compound but not describing it explicitly, the invention had to be considered novel (see **T 7/86**, **T 85/87**, **T 133/92**).

(b) if, with the same prior art, the subject-matter of the invention was a second family of compounds partially covering the first, the invention was not new (see **T 124/87**).

As regards case (a) the board said, "**That** case is not comparable with the present one in which a distinction must be drawn between the novelty of a group of substances defined by a general formula and a second group of substances partially covering the first and defined by another general formula, because the **concept of individualisation** naturally only applies to the structural definition of a single compound, not a collection of compounds".

Case (b) was extensively discussed in **T 124/87** (OJ 1989, 491). This decision dealt with the problem of assessing the novelty of a class of compounds defined with parameters within numerical ranges. The patent in suit claimed a class of compounds defined by parameters within numerical ranges while the prior document disclosed a process by which a class of compounds could be prepared - comprising those claimed in the patent in suit - having the combination of parameters required by the main claim of the latter.

In that particular case, the specifically described example in the prior document did not disclose the preparation of any particular compounds within the class defined in the claims of the disputed patent. However, it had been accepted by the patentee that a skilled man would have no difficulty in preparing such compounds within the class defined by the claims of the disputed patent using the process described in said prior document, in combination with his common general knowledge, so that the disclosure of the prior document had to be regarded as not only limited to the particular compounds whose preparation was described in the examples, but also comprising the general class of compounds made available to the skilled man in that technical teaching, even though only certain compounds within this class were described as having been prepared. Since the compounds as defined in the claims of the disputed patent formed a major part of this general class, they formed part of the state of the art and therefore lacked novelty.

In **T 133/92** the question to be answered in examining novelty was whether the selection of the alkyl group as defined in claim 1 of the disputed patent had been made available to the public within the meaning of Art. 54 EPC, having regard to the disclosure of a prior document. Citing **T 666/89** (OJ 1993, 495), the respondents (patent proprietors) contended that the legally correct approach for deciding selection novelty was identical or very similar to that employed in determining obviousness. In particular, they argued that in cases of overlapping ranges of compounds, a claim to a narrower range as compared with a broader prior art range was always selectively novel if it could be demonstrated that the narrow range was inventive over the broader range. However, the board observed that in the case cited the board had repeatedly emphasised that selection novelty was not different from any other type of novelty under Art. 52 EPC and Art. 54 EPC, so that the proper approach was to consider availability in the light of a particular document. Thus the board found that a claimed group of compounds essentially resulting from omitting those parts of a larger group of compounds which a skilled person would have immediately considered as being less interesting than the rest, could not be selectively novel. In addition, in the board's opinion, a skilled person would, having regard to these considerations, have seriously contemplated applying the technical teaching of this prior art document in the range of overlap.

#### 4.1.3 Novelty of enantiomers

According to decision **T 296/87** (OJ 1990, 195), the description of racemates did not anticipate the novelty of the spatial configurations contained in them; racemates were described in the state of the art by means of expert interpretation of the structural formulae and scientific terms; as a result of the asymmetric carbon atom contained in the formula the substances concerned might occur in a plurality of conceivable spatial configurations (D and L enantiomers) but the latter were not by themselves revealed thereby in an individualised form. That methods exist to separate the racemate into enantiomers was something that should only be considered with respect to inventive step.

In **T 1048/92** the board observed that the fact that the disclosure of the prior document did not embrace more than two possible steric configurations did not take away the novelty of the specific one which was claimed in the application, because there was no unambiguous technical teaching directed to that configuration. The novelty of such an individual chemical configuration could only be denied if there were an unambiguous disclosure of this very



configuration in the form of technical teaching. It was thus not sufficient that the configuration in question belonged conceptually to a disclosed class of possible configurations without any pointer to the individual member.

In **T 1046/97** the claim was directed to a specific pure enantiomer. The examining division found that prior art document (B) disclosed a compound of the same formula as the one claimed by the applicant but without giving any information on its stereochemical configuration. However, in (B) it was also stated that "all optically active forms of the compounds described therein were enclosed in the teaching thereof." Since it belonged to the skilled person's general knowledge to identify such mixtures and to separate them, in the examining division's view the claimed enantiomer was not novel.

The board saw no reason to believe that a skilled person would not combine the disclosure of that compound with the reference to the racemic, meso and optically-active forms. However, it was established case law of the boards of appeal that the novelty of an individual chemical compound could only be denied if there was a direct and unambiguous prior disclosure of this very compound in the form of a technical teaching (see **T 181/82**, OJ 1984, 401; **T 296/87**, OJ 1990, 195). It was thus not sufficient for denying novelty that the claimed enantiomer belonged conceptually to the group of possible optically-active forms mentioned in (B) unless there was a pointer to the individual member of the group at stake. Thus, the claimed specific enantiomer being incontestably neither a racemate nor a meso form, the assessment of novelty crystallised on the question, whether it was directly and unambiguously derivable from the disclosure of the compound when combined with the reference to the optically active forms.

The board held that the term "optically-active forms" was to be interpreted as embracing any stereochemical form of the compounds disclosed in (B), independently of whether such property was obtained by a pure stereochemical isomer or by any mixture of such isomers. Since (B) provided no information about any specific stereochemical form this disclosure must be regarded as undifferentiated, with the effect that the reference to "all optically active forms of the compounds described therein" could not be equated to an individualised disclosure of a specific enantiomer. The board thus held that the specific configuration of the claimed enantiomer was not directly and unambiguously derivable from the teaching of (B) and novelty not destroyed.

#### 4.1.4 Achieving a higher degree of purity

In **T 990/96** (OJ 1998, 489), it had to be examined whether the feature under dispute, which in fact represented a **specific degree of chemical purity** (in particular diastereomeric purity) constituted a "new element" imparting novelty to the claimed subject-matter.

The board stated that it was common general knowledge that any chemical compound obtained by a chemical reaction would normally contain impurities for various reasons and that it was not possible for thermodynamical reasons to obtain a compound, which was - in the strict sense - completely pure, ie totally free of any impurity. It was, therefore, common practice for a person skilled in the art of preparative organic chemistry to (further) purify a compound obtained in a particular chemical manufacturing process according to the

prevailing needs and requirements. Conventional methods for the purification of low molecular organic reaction products, which could normally be successfully applied in purification steps, were within the common general knowledge. It followed that, in general, a document disclosing a low molecular chemical compound and its manufacture made this compound available to the public within the meaning of Art. 54 EPC in **all grades of purity** as desired by a person skilled in the art.

Exceptional situations could exist which could justify a different conclusion. One such exceptional situation could be a situation where it was proved on the balance of probability that all prior attempts to achieve a particular degree of purity by conventional purification processes had failed.

In **T 728/98** (OJ 2001, 319), the applicant (appellant) argued that the situation was such an exceptional one as mentioned in **T 990/96**. The claimed pharmaceutical composition differed from the state of the art because the particularly high purity level of the compound it contained could not be achieved by conventional methods.

The board found, however, that the applicant, who bore the burden of proving this allegation, had not provided the necessary evidence. In fact, the prior-art teaching yielded significant, even if small, quantities of the substantially pure compound using conventional purification methods. The general rule therefore applied that achieving a particularly high level of purity of a known compound was not a feature to be regarded as imparting novelty to such a product over the prior art.

## **4.2 Selection of parameter ranges**

### 4.2.1 Selection from a broad range

The principles applied by the boards of appeal as part of their established case law on the novelty of selection inventions were developed in particular in **T 198/84** (OJ 1985, 209). They are summarised briefly in **T 279/89** as follows: a selection of a sub-range of numerical values from a broader range is new when each of the following criteria is satisfied:

- (a) the selected sub-range should be narrow;
- (b) the selected sub-range should be sufficiently far removed from the preferred part of the known range (as illustrated for instance in the examples given in the prior art);
- (c) the selected sub-range should not be an arbitrarily chosen specimen from the prior art, ie not merely one way of carrying out the prior teaching, but must provide a new invention (purposive selection).

The three postulates for the novelty of a selected sub-range are based on the premise that novelty is an absolute concept. It is therefore not sufficient merely for the wording of the definition of an invention to be different. What has to be established in the examination as to novelty is whether the state of the art is such as to make the **subject-matter** of the invention available to the skilled person in a technical teaching (**T 198/84** (OJ 1985, 209), **T 12/81** (OJ 1982, 296), **T 181/82** (OJ 1984, 401) and **T 17/85** (OJ 1986, 406)).

With reference to the third criterion, the board in **T 198/84** was of the opinion that this view of novelty really entailed more than just a formal delimitation vis-à-vis the state of the art. There would be delimitation only in respect of the wording of the definition of the invention, but not in respect of its content, if the selection were arbitrary, ie if the selected range only had the same properties and capabilities as the whole range, so that what had been selected was only an arbitrary specimen from the prior art. This was not the case if the effect of the selection, eg the substantial improvement in yield, occurred in all probability only within the selected range, but not over the whole known range (purposive selection).

To prevent misunderstanding, the board emphasised, following **T 12/81** (OJ 1982, 296), that a sub-range singled out of a larger range was new not by virtue of a newly discovered effect occurring within it, but had to be new per se. An effect of this kind was not therefore a prerequisite for novelty; in view of the technical disparity, however, it permitted the inference that what was involved was not an arbitrarily chosen specimen from the prior art, ie not a mere embodiment of the prior description, but another invention (purposive selection).

In **T 17/85** (OJ 1986, 406) the novelty of the claimed range was denied, because the preferred numerical range in a citation in part anticipated the range claimed in the application. A claimed range could not be regarded as novel, at least in cases where the values in the examples given in the citation lay just outside the claimed range and taught the skilled person that it was possible to use the whole of this range.

In **T 247/91**, in deciding the question of the novelty of an invention, the board emphasised that consideration had to be given not only to the examples but also to whether the disclosure of a prior art document as a whole was such as to make available to the skilled person as a technical teaching the subject-matter for which protection was sought. The board stated that it was accepted by the appellant (patent proprietor) that a skilled reader of the cited document had no reason to exclude the range of 85 to 115°C claimed in the patent in suit when carrying out the invention disclosed in the citation. The teaching of the cited document was clearly not limited to the use of the exemplified temperatures but extended to the whole described temperature range of 80 to 170° which had been made available to the skilled person as a technical teaching and the subject-matter of the patent in suit lacked novelty.

In **T 406/94** the board found that the percentage range cited in the prior art, although numerically close to the claimed range, could not be relied on to anticipate the subject-matter claimed, because the percentage cited in the prior art was based on different starting materials.

In **T 209/94**, in spite of the fact that the temperature ranges of pyrolysing steps to be carried out for preparing fibres overlapped ("greater than about 1600°C" according to the invention and "from 900 to 1800" according to the prior art document), the functional limitation of the pyrolysing step established by the statement introduced into claims 1 and 2 of the application at issue - "for a period of time sufficient to reduce oxygen and/or nitrogen content of the fibres to below about 0.5 % by weight" - distinguished the claimed process from the process according to prior art document. Indeed, from the latter document the board concluded that the presence of nitrogen (and boron) in the fibres in certain amounts was essential for their temperature stability. Since this improved thermal stability of the fibres was the very object

of the invention disclosed in the prior art, fibres which would not have met this requirement could not have been considered to be within the teaching of this document. This meant, by implication, that fibres having a nitrogen and/or oxygen content which was too low to produce the desired thermal stability were not within the scope of the invention disclosed in the prior art: the lowest value disclosed in the prior art document was 3.89%, whereas according to the application at issue the maximum amount permitted was 0.5%.

In **T 610/96** the patentee/respondent claimed a magnetoresistive material comprising magnetic and non-magnetic metallic thin film layers. The board found that the claimed ranges defining the composition of said layers must be considered as a narrow selection of the generic disclosure of prior art document D10 which did not overlap with the sub-ranges preferred in D10 and which further selected a specific non-magnetic layer among a group of possible layers. This selection also was sufficiently far removed from the specific examples of D10. Furthermore, the claimed material showed different characteristics of the magnetoresistance change, so that the specific sub-range was not simply an arbitrary part of the generic disclosure of D10, but was of a different nature and therefore novel. The criteria for selection inventions set out in **T 279/89** were thus satisfied. Moreover, since a passage of D10 might be seen as a statement dissuading the skilled person from applying the concept of D10 in the sub-range of the contested patent, the person skilled in the art would not seriously contemplate applying the teaching of D10 in this range (see **T 26/85**, OJ 1990, 22).

#### 4.2.2. Overlapping ranges

In decision **T 666/89** (OJ 1993, 495) the board gave a ruling on novelty assessment in cases of overlapping numerical ranges. The patent related in particular to a shampoo comprising 8-25 % anionic surfactant and 0.001-0.1 % cationic polymer. In an earlier patent application a shampoo composition had been disclosed containing 5-25 % anionic surfactant and 0.1-5.0 % cationic polymer.

The board held that the composition was not new. In the board's view, there was no fundamental difference between examining novelty in situations of so-called "overlap" or "selection", and in doing so in other situations, although it might be helpful, in order to verify a preliminary conclusion of a novelty examination in cases of overlap, to investigate whether or not a particular technical effect was associated with the narrow range in question. It needed to be stressed, however, that such a particular effect was neither a prerequisite for novelty nor could it as such confer novelty; its existence could merely serve to confirm a finding of novelty already achieved. The term "available" in Art. 54(2) EPC clearly went beyond literal or diagrammatical description, and implied the communication, express or implicit, of technical information by other means as well. Thus it was clear that matter that was hidden, not in the sense of being deliberately concealed but rather in the sense of being reconditely submerged in a document, would not have been "made available" in the above sense. In the case of overlapping ranges of physical parameters between a claim and a prior art disclosure, what would often help to determine what was "hidden" as opposed to what had been made available, was whether or not a skilled person would find it difficult to carry out the prior art teaching in the range of overlap. A similar approach was to consider whether a person skilled in the art would, in the light of all the technical facts at his disposal, "seriously contemplate" applying the technical teaching of the prior art document in the range of overlap.

Realising that the concept of "seriously contemplating" moving from a broad to a narrow (overlapping) range seemed akin to one of the concepts used by the boards for assessing inventive step, namely, whether the notional addressee "would have tried, with reasonable expectation of success" to bridge the technical gap between a particular piece of prior art and a claim whose inventiveness was in question, the board added that its novelty concept was fundamentally different from this "inventive-step concept" because, in order to establish anticipation, there could not be a gap of the above kind. Novelty was carefully analysed on the basis of comparable considerations in **T 366/90** and **T 565/90**.

Decision **T 26/85** suggested, as a specific test for determining whether a technical teaching had been made available to the public, posing the question whether the person skilled in the art would in the light of the technical facts **seriously contemplated** applying the technical teaching of the prior art document in the range of overlap. If it could be fairly assumed that he would do so, it had to be concluded that no novelty existed. This formulation of the question was adopted inter alia in **T 279/89**, **T 666/89**, **T 255/91** (OJ 1993, 318), **T 369/91** (of 7 October 1992), **T 631/92** and **T 660/93**.

In **T 751/94** the board found that it was clear that the method according to the cited document was not to be carried out in the overlapping range, and consequently novelty was not destroyed by the overlap. In addition the combination of parameters in the claimed invention was not disclosed in, and was not clearly derivable from, the cited document.

#### 4.2.3 Multiple selection

In **T 245/91** the appellants (patent proprietors) contested the lack of novelty objection of the respondents in the light of the disclosure in a prior document and contended that the subject-matter of claim 1 amounted to the purposeful selection of a small area from the very broad disclosure in the said document. The board observed that most of the ranges in claim 1 of the patent in suit could be obtained by narrowing down the ranges according to the cited document by approximately 25 to 80% and restricting them to their central portion, and that in a situation like this, where several ranges of parameters were to be considered, a careful comparison had to be carried out in order to assess whether or not the subject-matter of the claimed invention was available to the skilled person. Any obviousness considerations were to be strictly avoided. The board, referring to **T 666/89** (OJ 1993, 495), emphasised that under the EPC novelty had to be decided by reference to the total information content of a cited prior art document. In the board's judgment, the combination of the relevant features would not have been seriously contemplated by the skilled reader and was not made available to him, because the said features were not prominent in the cited document and did not therefore lend themselves to an unambiguous, implicit disclosure. A further point to consider was the number of parameters used to define the claimed subject-matter, since each of the ethylene polymers was characterised by several parameters. The board held that even if most of the ranges for these parameters corresponded to a more-or-less central portion of the range limiting the corresponding parameter in the composition according to the cited document, because of the number of parameters involved, which exceeded 10, the scope of the claimed blends was in reality quite narrow with regard to the breadth of the definition of the known composition. This was also the reason why the argument that there had been an implicit description of this narrow selection in the prior document was not

## *Novelty*

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accepted.

In case **T 653/93**, the appellant (applicant), whose patent was refused by the examining division, argued that the process of claim 1 was novel as it referred to a combination of three process features with selected ranges and product features with specific limits, which combination was not disclosed in the prior art document.

The board of appeal emphasised that in such situations the question of novelty could not be answered by contemplating the ranges of the various parameters separately. This would, in the board's judgment, be an artificial and unjustified approach, since it was not the specified ranges of the three parameters or their agglomeration that formed the subject-matter of claim 1, but the group of processes defined by the combination of these ranges, which was rather small when compared with the group of processes disclosed in the prior art document.

Thus the group of processes claimed, which was characterised by the combination of three specific process parameters, was not explicitly disclosed in the prior art document and therefore could be said to result from a "multiple (ie threefold) selection". The person skilled in the art, when applying the teaching of the prior art document, would not have had any reason to concentrate on the combination of the sub-ranges as defined in claim 1, eg because the omitted parts of the ranges disclosed in the prior art document could be recognised as of lesser interest. Since there was no indication to this effect, the "combined selection" did not emerge from the prior art document as being implicitly disclosed for the skilled person.

The novelty of the technical teaching of claim 1 was corroborated by experimental evidence showing that the products resulting from the claimed processes couldn't have been obtained by processes which were close to but nevertheless outside the range of the processes claimed. Moreover, the combination of properties of the products obtained by the claimed processes was not the inevitable result of the process disclosed in the prior art document but was obtained only by a particular combination of process parameters. It followed that the subject-matter of claim 1 was not considered as having been disclosed in the prior art document.

In **T 65/96**, there was no mention in the prior-art document D2 of a rubber-reinforced copolymer having the combined features forming the solution of the technical problem addressed in the opposed patent. The board pointed out that the argument of the appellant (opponent) that all the relevant parameters had been mentioned "within a few lines" was irrelevant, because the location within the document of a disclosure did not in itself suffice to show the true contextual relationship of the parameters, let alone establish that they were disclosed in combination, as required by the solution of the technical problem. In any case, one of the parameters was referred to in a quite separate section of the disclosure.

Furthermore, closer examination of D2 showed that the parameters of amount of rubber and particle size of rubber were merely disclosed as independent ranges without any indication as to how, or indeed whether, they might vary with one another. Whilst it was conceded by the respondent at the oral proceedings that D2 disclosed ranges partly overlapping with those defined in the solution of the technical problem, the latter required the simultaneous fulfilment

of three values of the same parameters.

The board came to the conclusion that the claimed solution was not arbitrary since it solved a specific technical problem compared with the products according to D2. Hence, the claimed solution, to the extent that it overlapped with the general disclosure of D2 at all, represented a narrow selection therefrom and fulfilled all the requirements of a true selection (see **T 198/84**, OJ 1985, 209).

#### **4.3 Subject-matter group**

**T 763/89** looked at selection from a generically defined group of multilayer materials. The patent related to a reversal colour photographic material comprising three layers having differing colour sensitivity, each layer comprising a further three layers having the same colour sensitivity but differing photographic sensitivity. The closest prior art consisted of a reversal material with "at least two" layers. The opponent had argued that the multilayer materials disclosed by this prior art also included the three-layer material claimed, therefore causing lack of novelty. The board, however, held that it was new: although "at least two" was synonymous with a multilayer material and set the lower limit in the form of a double-layer material (the description related to any multilayer material without specifying an upper limit for the number of possible layers), the only theoretical examples given for such multilayer materials were double-layer materials. Nor did the documents cited in support of the opposition as much as hint at a three-layer material. It might appear logical for a three-layer material to form part of the group of multilayer materials in the cited documents, but this did not mean that it was thereby disclosed. On the contrary, it was a new material forming part of this group and selected from it.

The board gave this ruling in the context of previous case law on selection inventions involving chemical substances. This had laid down that a technical teaching was prejudicial to novelty if it disclosed a substance in individualised form, ie one clearly distinguishable from structurally similar substances. This principle for assessing the novelty of individuals as distinct from a group could be applied to things such as the photographic material in question, which was clearly distinguishable from other things forming part of the same generically described group.

### **5. Novelty of use**

#### **5.1 First medical use**

##### 5.1.1 Introduction

Methods for the surgical or therapeutical treatment of the human or animal body and diagnostic methods practised on the human or animal body ("medical methods") are not regarded as inventions susceptible of industrial application (Art. 52(4) EPC, first sentence). Art. 54(5) EPC provides that the general rules of law relating to novelty (Art. 54(1) to (4) EPC) do not exclude the patentability of any substance or composition, comprised in the state of the art, for use in a method referred to in Art. 52(4) EPC, provided that its use for any method referred to in that paragraph is not comprised in the state of the art. Thus in addition to the

general concept of novelty (Art. 54(1) to (4) EPC) this article introduces, in respect of substances and compounds used in surgical and therapeutic treatment and in diagnostic processes carried out on humans and animals, a **special concept of novelty** unknown in other technical fields (**T 128/82** (OJ 1984, 164)).

For the first medical use of a known substance, Art. 54(5) EPC provides a particular form of claim (purpose-related product claim). In **G 5/83** (OJ 1985, 64) the Enlarged Board observed that the inventor of a "first medical indication" could obtain purpose-limited product protection for a known substance or composition, without having to restrict himself to the substance or composition when in a form technically adapted to a specified therapeutic purpose. The appropriate protection for him was, therefore, in its broadest form, a purpose-limited product claim. No problem arose over its susceptibility of industrial application, within the meaning of Art. 57 EPC.

#### 5.1.2 Scope of a purpose-related product claim

In **T 128/82** (OJ 1984, 164) the board considered the question of a first medical indication (first medical use of a known substance) with regard to the breadth of the purpose-related product claim. The examining division had refused the application on the grounds that it failed to fulfill the requirements of Art. 52(4) EPC and Art. 54(5) EPC as the claims were not limited to the specific therapeutic use of the known compounds as first discovered. The board had to consider whether the broad version of the claims was allowable having regard to Art. 54(5) EPC and, in particular, whether the EPC offered a basis for a limited statement of therapeutic purpose susceptible of narrow interpretation. In the opinion of the board the EPC neither prohibited nor required an unlimited statement of purpose. It held that Art. 54(5) EPC permitted a purpose-limited substance claim stating a general therapeutic purpose and found that where a known compound was for the first time proposed and claimed for use in therapy, the fact that a specific use was disclosed in the specification did not in itself call for a restriction of the purpose-limited product claim to that use (see also **T 36/83** (OJ 1986, 295) and **T 43/82**). The board further observed that the practice of the EPO hitherto had shown that substance and medical preparation claims for therapeutically active compounds not limited to specific indications were allowed, even though as a rule only certain specific activities were stipulated. As a general rule, this practice concerned new compounds. In the board's judgment, it could not be inferred from the EPC that compounds, which - although previously known - were still patentable under Art. 54(5) EPC, were in principle to be treated differently. If an inventor was granted absolute protection in respect of a new chemical compound for use in therapy, the principle of equal treatment would also require an inventor, who for the first time made a known compound available for therapy, to be correspondingly rewarded for his service with a purpose-limited substance claim under Art. 54(5) EPC covering the whole field of therapy. Any other treatment would only be justified were Art. 54(5) EPC to forbid outright a broad scope of protection. The fact that Art. 54(5) EPC did not contain any requirement that protection should be broad was not in itself a reason for refusing to grant such protection. As a general rule, the usual practice as it related to new compounds should be followed. On the other hand, the mere fact that there were no instructions concerning all and any possible specific therapeutic applications did not justify limiting the scope to the therapeutic application actually mentioned. This would not be in keeping with general EPO practice concerning therapeutically active compounds.



The board noted that under Art. 54(5) EPC a compound which was known but not used therapeutically was to be regarded as novel. Novelty, however, was not only destroyed by the fact that the same specific therapeutic effect was already known in the art, but suffered also from the disclosure of any other specific therapeutic application. The disclosure of any specific effect, therefore, always had the same consequences as far as novelty was concerned - which in turn made it fair to regard as admissible a broad statement of purpose covering all and any specific indications.

#### 5.1.3 Protection of a preparation in the form of a "kit-of-parts"

In **T 9/81** (OJ 1983, 372) it was held that combined preparations the individual components of which represented known therapeutic agents might be protected in a formulation corresponding to Art. 54(5) EPC even when claimed as a kit-of-parts, providing those components formed a functional unity (true combination through a purpose-directed application. Claim 1, which was drawn up in the form stipulated in Art. 54(5) EPC, referred to a combined preparation containing an oxazaphosphorin cytostatic agent and the sodium salt of 2-mercapto-ethane-sulphonic acid as therapeutic active ingredients. The first-mentioned component of the product was known, and the second was a known mucolytic agent. According to the documentary prior art available to the board, the two active ingredients had never been used together for a **new joint effect** and were **unknown as a composition**. The active ingredients which were administered preferably at the same time according to the invention did not therefore represent a mere aggregate of known agents, but a new combination with the surprising, valuable property that the severe side-effects to be expected when administering the cytostatic agents were absent as a result of the detoxifying effect of the sodium 2-mercapto-ethane-sulphonate.

Claim 1 referred to a product which was limited to simultaneous, separate or sequential use in cytostatic therapy. In the board's judgment, it followed from this indication of purpose that the components were no longer necessarily present as a union, eg in composition, since the components would not otherwise be available for separate or sequential application. The board stated that as a **kit-of-parts**, however, it was not necessarily a true combination in view of the physical separation of the individual components. The mere loose association of known components did not in itself turn them into a functional unity in which a necessary and direct interaction between the components was a precondition for the purposive use (eg lock and key, match and striking surface, two-component adhesive). Although the components in the claimed combination did not enter into such direct interaction with each other, the indication of purpose for the combined therapy might re-establish the unity of the product as a functional amalgamation of its two components, if it represented a genuine restriction to the specified application. In so far as the components could not attain the advantageous effect according to the invention independently of each other, the joint effect justified the unity of the combined product as a result of the limitation by the indication of purpose of the area of protection of the claim under the conditions laid down in Art. 54(5) EPC, even if the components were presented side-by-side and not as a union. Since the individual components of the combined product in the present claims had themselves known therapeutic applications, these claims, by expressly including the separate presentation of those components, were indeed to be regarded as limited to the joint use of the combined products, so that the individual applications according to the state of the art were excluded.

## 5.2 Second (further) medical use

### 5.2.1 Formulation of claims

#### (a) Use of a substance or composition for the manufacture of a medicament

The question of law which was referred to the Enlarged Board in **G 5/83** (OJ 1985, 64) (see also **G 1/83**, OJ 1985, 60; **G 6/83**, OJ 1985, 67) arose essentially because of the particular exclusion from patentability in relation to "methods for treatment of the human or animal body" set out in Art. 52(4) EPC, first sentence, and the exception to the novelty requirement set out in Art. 54(5) EPC. In the field of medical or veterinary inventions, the normal type of **use claim** is prohibited by Art. 52(4) EPC, but Art. 54(5) EPC expressly provides for an exception to the general rules governing novelty (Art. 54(1) to (5) EPC) in respect of the first medical or veterinary use of a substance or composition, by allowing a claim to the substances or compositions for that use.

The Enlarged Board did not accept claims directed to the use of a known substance X for the treatment of disease Y, because such a claim would relate to a medical method which was not patentable under Art. 52(4) EPC. However, it allowed claims of the type "use of substance X for the manufacture of a medicament for therapeutic application Y". The Enlarged Board derived the novelty of such claims from their sole new feature, that is the new pharmaceutical use of that known substance. The Enlarged Board found that no intention to exclude second (and further) medical indications generally from patent protection could be deduced from the terms of the EPC. As a result, the Enlarged Board considered that it was legitimate in principle to allow claims directed to the use of a substance or composition for the manufacture of a medicament for a specified new and inventive therapeutic application, even where the process of manufacture as such did not differ from known processes using the same active ingredient.

#### (b) Process for the manufacture of a medicament

In **T 51/93** the board found that document (4) anticipated process claim 1 put forward in the set of claims for AT, ES and GR, as the novelty of the intended use of the product could only be taken into account as a technical feature limiting the claim where the claim took the form of a use claim as approved in decision **G 5/83**. The use claim as approved in decision **G 5/83** emphasised that the intended use was a **technical** feature to be taken into account in assessing novelty, and which limited the claim. The board stated that normally, however, in a claim to a "Process for making X for use Y comprising the steps of..." the process claim was interpreted as covering the particular process of making X irrespective of whether that X was to be used for use Y or not. Thus, in such a process claim the wording "for use Y" was intended not as a distinguishing technical feature but merely as an **illustration** of what X could be used for. Consequently the board considered that in the process claim 1 for AT, GR and ES the words "for use in the treatment by subcutaneous administration ..." were to be treated in accordance with common practice for process claims as merely illustrative and not as a restrictive technical feature capable of establishing novelty. The board further stated that, for the purpose of assessing novelty in EPO proceedings, the interpretation to be given to a claim had to be the same irrespective of the contracting states for which the claim was put

forward. The fact that the contracting states AT, ES and GR had, for a time, laws restricting claimable subject-matter, could not, where the prior art was the same for all designated states, lead to a claim being interpreted as novel and allowable for these states if it was not also novel and allowable for all other contracting states. Thus the fact that process claim 1 was put forward only for AT, ES and GR did not assist the appellant.

In **T 893/90**, however, a board of appeal came to a different conclusion. The claims were formulated as method claims, namely as a method of producing a pharmaceutical composition for controlling bleeding in non-haemophilic mammals characterised by admixing the two components in functionally defined amounts and proportions. In the board's judgment, the said claims did not substantially differ in their formulation from use claims, ie from claims directed to the use of the mixture of the two components in functionally defined amounts and proportions for the stated purpose, namely for producing a pharmaceutical composition for controlling bleeding in non-haemophilic mammals. In this respect, it was also observed that, according to claim 1, the mixture excluded other physiologically active materials; thus, the said mixture was well-defined in terms of its components. The board concluded that the claims were thus in accordance with established EPO case law that claims are allowable directed to the use of a substance or composition for the manufacture of a medicament for a specified new and inventive therapeutic application, even if the process of manufacture as such does not differ from known processes using the same active ingredient(s) (see **G 5/83**).

In **T 958/94** (OJ 1997, 242), the examining division had refused the claims for Greece and Spain on the grounds that because they were directed to a process rather than an application or use they were not in the "second medical indication" form stipulated by the Enlarged Board of Appeal in **G 6/83** (OJ 1985, 64). The examining division had taken the view that the novelty of "the use of a substance for the manufacture of a medicament" was linked to formal requirements and that given the order of decision **G 6/83** on the protection of the second medical indication, only **use** claims - not **process** ones - fulfilled those requirements. The appellant (applicant) had filed an appeal against that decision, requesting that the decision to refuse the application be set aside.

The board noted that Enlarged Board decisions **G 1/93**, **G 5/83** and **G 6/83** made no mention of requirements of form or category governing claims directed to a medicament's second therapeutic indication. In the board's view the French wording "revendications ayant pour objet" used in decision **G 6/83** referred not to the formal aspect of the category of a claim but rather to its substance, ie the definition of the claimed invention in terms of its essential features. Parallel decisions **G 1/83** and **G 5/83** in German and English used the words "Patentansprüche gerichtet auf" and "claims directed to" rather than "Gegenstand" or "subject-matter", which also showed that the determining factor was not the wording or category chosen for the claim but its substance, namely the technical feature which formed the essence of the invention claimed (use of the substance in question). This interpretation was confirmed by the reasons for decisions **G 1/83**, **G 5/83** and **G 6/83**.

In point 11 of decision **G 5/83** (first paragraph) the Enlarged Board held that an invention relating to an activity could be claimed either as the application or use of a thing for a stated purpose (eg to achieve a technical result) or as a method or process to achieve the same

result using the same thing, depending on the applicant's preference. Either type of claim also involved a sequence of steps giving rise to the final effect. In terms of use, therefore, there was no difference of substance. This general rule also applied in the field of therapy. There was no discernible substantive difference between a claim for the use of a substance or composition for the treatment of the human or animal body by therapy and a claim directed to a method of treatment of the human or animal body by therapy. The sole difference was in the wording, as was emphasised by the Enlarged Board in point 13 of decision **G 5/83**. Thus, manufacturing a medicament did indeed involve a sequence of common and obligatory steps, irrespective of the form of the claims which circumscribed its manufacture, and whether the claims were for the "application of a substance to obtain a medicament intended for a new therapeutic use" or for a "process to obtain a medicament intended for the new application, characterised in that the substance is used". Although the active substance per se, the medicament and the process for its manufacture were already known, the Enlarged Board in decisions **G 1/83**, **G 5/83** and **G 6/83** allowed a claim for preparing the medicament for the new therapeutic indication and directed to the substance's use in manufacturing the medicament intended for that new therapeutic indication. In the same conditions - ie where the active substance, the medicament and the process for its manufacture all lacked novelty - it would therefore be unjustified to regard a claim of the type "method for manufacturing the medicament intended for the new therapeutic indication" as not patentable, given that a claim for the use of a substance to manufacture a medicament intended for a new therapeutic use and a claim for a method of manufacturing the medicament intended for the new use and characterised in that the same substance was used were substantively equivalent. This decision endorses the approach already outlined in **T 893/90** of 22 July 1993.

(c) Further issues relating to the second medical use claim

In **T 570/92** the board allowed a claim which took the form of a claim to a second medical use of a known substance and referred to a substance which had not previously been described in concrete terms. In line with **G 5/83**, what was claimed was the use of that substance for the manufacture of a long-lasting medicament for the oral treatment of hypertension, to be administered once or twice daily. The latter feature, concerning the administration of the medicament, did not lead to exclusion from patentability under Art. 52(4) EPC. The wording used served not to indicate to the doctor the frequency of administration actually intended when treating an individual patient, but merely to convey the teaching that the success of the treatment was assured if the medicament was administered not more than twice a day.

In **T 143/94** (OJ 1996, 430) the board found that a claim directed to the use of a substance or composition for the production of a medicament for a therapeutic application did not conflict with Art. 52(4) EPC or Art. 57 EPC (see **G 1/83**, **G 5/83**, **G 6/83**); this was true irrespective of what purpose the claim served (protection of a first medical use of a substance or composition, or protection of a further medical use). Accordingly, prior evidence of a further medical use was not required for this form of claim to be included in a patent application.

In **T 4/98** (OJ 2002, \*\*\*) the independent claims were drawn up in the form of "Swiss type" claims. The board had difficulties however in accepting the opposition division's opinion that these claims reflected in fact a second (further) medical use and that some particular features in the claims constituted a specified therapeutic application from which novelty for the claims

could be derived in accordance with the principles of decision **G 5/83** (OJ 1985, 64). The board held that in accordance with the principles in **G 5/83** and subsequent case law, the concept of second or further medical use can only be applied to claims to the use of substances or compositions for the preparation of a medicament intended for use in a method referred to in Art. 52(4) EPC. It noted that the concept of "therapy" or "therapeutic application" includes treatment of a particular illness or disease with a specified chemical substance or composition in a specified human or animal subject in need of such treatment and that in the absence of the identification of at least (i) the illness or disease to be treated or the ailment to be cured or (ii) the nature of the therapeutic compound used for treating or curing the disease or (iii) the subject to be treated, a mere process feature could not be construed as specifying a particular method of treatment or therapeutic application within the meaning of Art. 52(4) EPC (see Reasons, paragraphs 8.1 and 8.2). Thus the board came to the conclusion that the subject-matter of the independent claims was accordingly to be understood as relating to a non-therapeutic technical activity (process).

#### 5.2.2 Novelty of the new therapeutical application

##### (a) Identification of the subject to be treated

The board of appeal applied the principles of decision **G 5/83** in case **T 19/86** (OJ 1989, 24). It had to decide whether the application of a known medicament for the prophylactic treatment of the **same disease** in an **immunologically different** population of animals of the same species could be considered a new therapeutic application from which novelty for the claims could be derived. According to decision **T 19/86** the question of whether a new therapeutic use was in accordance with decision **G 5/83** should not be answered exclusively on the basis of the ailment to be cured but also on the basis of the subject (in the case in question, the new group of pigs) to be treated. A therapeutic application was incomplete if the subject to be treated was not identified; only a disclosure of both the disease **and** the subject to be treated represented a complete technical teaching. The proposal according to the application to protect animals which could not hitherto be protected from the disease in question, by intranasally administering to them a known serum, could not be considered disclosed in the prior art and therefore constituted a novel therapeutic application in accordance with the above-mentioned decision of the Enlarged Board (see also **T 893/90**).

##### (b) Distinguishing between group of subjects

In **T 233/96** the board held that if the use of a compound was known in the treatment or diagnosis of a disease of a particular group of subjects, the treatment or diagnosis of the same disease with the same compound could nevertheless represent a novel therapeutic or diagnostic application, provided that it is carried out on a new group of subjects which is distinguished from the former by its physiological or pathological status (**T 19/86**, OJ 1989, 25; **T 893/90**). This does not apply, however if the group chosen overlaps with the group previously treated or the choice of the novel group is arbitrary which means that no functional relationship does exist between the particular physiological or pathological status of this group of subjects (here humans who are unable to exercise adequately) and the therapeutic or pharmacological effect achieved.

(c) Difference in the prescribed regimen of two drugs

In **T 317/95** the issue of novelty concerned both the question of whether the mere difference in the course of the administration of two drugs (ie the prescribed regimen) could indeed confer novelty on claim 10, and the objections to this claim which appeared to imply the issue of patentability under the terms of Art. 52(4) EPC. The invention involved the treatment of exactly the same category of patients by separately administering to them the same two commercial drugs in the same concentration, dosage and formulation for the treatment of the same illness or disease, with the sole exception that the prescribed regimen for this treatment was slightly modified (BNS and cimetidine were administered to the patient within five minutes of each other).

The board observed that in **G 5/83** (OJ 1985, 64) the Enlarged Board had stated that it was the purpose of the exclusion of medical treatments from patentability according to Art. 52(4) EPC to free from restraint non-commercial and non-industrial medical and veterinary activities. The board did not question the appellants' submission that the pharmaceutical industry was engaged in optimising the use of drugs and medicaments by investigating the optimum regimen for their administration to achieve the maximum possible therapeutic effect. However, the board pointed out that determination of the best individual treatment schedule, in particular the prescribing and modification of drug regimens used for administering a particular medicament, so as to comply with the specific needs of a patient, appeared to be part of the typical activities and duties of the doctor in attendance in exercising his professional skills of curing, preventing or alleviating the symptoms of suffering and illness. These were typical non-commercial and non-industrial medical activities which Art. 52(4) EPC intended to free from restraint. The board found that before the priority date of the contested patent, the medical practitioner was aware of the possibility of treating gastrointestinal disorders using the particular combination of drugs defined in claim 10. He was similarly in a position to prescribe an effective regimen for treating each patient according to his or her individual needs. It therefore appeared questionable to the board whether the feature at issue could indeed be considered to represent a further medical indication from which novelty could be derived on the basis of the principles set out in decision **G 5/83**. In any case, inventive step was lacking.

(d) Difference in the mode of administration

In **T 51/93** a European patent application relating to the use of human HCG for the manufacture of a medicament for subcutaneous administration was refused by the examining division because prior art document D(1) implicitly disclosed the subcutaneous administration, and because the subcutaneous administration of HCG was an obvious alternative to intramuscular administration. D(4) (cited by the board) disclosed vials for injection containing HCG and diluent, obtained by mixing HCG with a carrier and/or diluent. The only difference between the invention as claimed and the disclosure of D(4) was that the claim was directed to an intended method of subcutaneous administration. The claim was drafted in the form approved in decision **G 5/83** for claims where the novelty was solely that of the intended use, so the only question was whether a difference in the mode of administration of a medicament could be treated as a new therapeutic use. The board, relying on **T 290/86**, observed that the mode of administration might be a critical factor in a medical

treatment and no reason could be seen for any **a priori** bar to relying on this difference when distinguishing over the prior art. Rather, patentability should be treated as depending only on whether this modification was in fact novel and inventive. Thus, it was possible to acknowledge novelty over D(4) (see **T 143/94**, OJ 1996, 430).

(e) Novelty based on the different technical effect

In decision **T 290/86** (OJ 1992, 414) the board had to give a ruling on the novelty of a claim drawn up in the form of a second medical use. The claim's subject-matter was the use of a lanthanum salt for the preparation of a composition intended to remove dental plaque (according to the patent proprietor, plaque removal had the effect of preventing caries). The closest prior art disclosed compositions comprising salts containing various elements, including lanthanum, to depress the solubility of tooth enamel in organic acids, and thus to inhibit tooth decay. The board considered the claimed invention new. The grounds for its decision were as follows: "When a prior document and a claimed invention are both concerned with a similar treatment of the human body for the same therapeutic purpose, the claimed invention represents a further medical indication as compared to the prior document within the meaning of decision **G 5/83** if it is based upon a different technical effect which is both new and inventive over the disclosure of the prior document". In this case the technical effect considered new was the removal of dental plaque, whereas the prior art only disclosed the depression of enamel solubility in organic acids.

(f) Statement of purpose

In **T 227/91** (OJ 1994, 491) the board held that the purpose of a surgical use alone could not render novel the subject-matter of a claim relating to the use of the components of a known instrument for its manufacture, ie assembly. The claim under consideration related to the use for intercepting a laser beam of substrate means and coating means in the manufacture of a laser surgical instrument. The indication of the purpose, ie intercepting the laser beam, was a characteristic of the surgical use of the instrument and did not affect the structure or composition of the entity itself. This kind of functional reference could not normally impart novelty to an otherwise known article unless the function implied a necessary modification of the article itself.

In decisions **T 303/90** and **T 401/90** the main claims related to a contraceptive composition comprising known pharmaceutical compounds. The board was of the opinion that the composition as claimed could not be considered novel and the added word "contraceptive" did not change the product claim into a use claim. Only in the case of first medical use could the addition of a purpose characteristic render a product claim new, if the product as such was known in other technical fields.

(g) Discovery of a previously unknown property of a compound

In **T 254/93** (OJ 1998, 285) an application relating to the use of a retinoid compound in association with the use of corticosteroids in the prevention of skin atrophy was refused by the examining division.

The board noted that it was a basic consideration in **G 2/88** that the recognition or discovery of a previously unknown property of a compound, such property providing a new technical effect, could involve a valuable and inventive contribution to the art. This was apparently the reason why the Enlarged Board of Appeal accepted that the use related to such a property could be regarded as a technical feature appropriate for establishing novelty. The board stated that it had no difficulty in accepting that the prevention of skin atrophy had to be regarded as a pharmaceutical feature and, following the conclusions of the Enlarged Board of Appeal, that the effect underlying this feature was not made available to the public in written form by any of the cited literature. Nevertheless, the question arose whether, in the case at issue, this effect represented a **technical effect** within the meaning of decisions **G 2/88** and **G 6/88**, which was necessary to establish novelty, under Art. 54(1) EPC, of the claimed subject-matter over the prior art. Although it concerned a specific aspect of the known use, the use specified in claim 1 (prevention of skin atrophy) was not finally different from the known use (treatment of dermatoses). The board observed that when a second medical indication was claimed in relation with the use of a constituent in the preparation of a known composition and the final effect was apparent in using the known composition for the known purpose, a technical problem could be seen neither in the obtention of the final effect nor in the preparation of the composition. The only remaining question could be the explanation of the phenomenon underlying the treatment according to the known process. However, the mere explanation of an effect obtained when using a compound in a known composition, even if the explanation related to a pharmaceutical effect which was not known to be due to that compound in the known composition, could not confer novelty on a known process if the skilled person was already aware of the occurrence of the desired effect when applying the known process.

### 5.2.3 Inventive step of the new therapeutical application

In **T 913/94** the appellant had argued that gastritis and ulcer were distinct diseases characterised by a different pathology. In the appellants' view, no class of medicaments existed, with the exception of the anti-acids, suitable for treating both diseases. In fact, the leading drugs for peptic ulcer were not used by the medical profession for treating gastritis.

In the context of assessing the **inventive merit** of the claimed use of GGA for the treatment of gastritis the board came to the conclusion that ulcer does not develop independently of gastritis and according to an exclusive mechanism, which would justify the occurrence of ulcer without any previous occurrence of gastritis, but, on the contrary, that the two diseases develop through the same mechanism, or at least through some common, early stages, on a scale of progressive, increasing severity of symptoms depending on the severity of the aggressive agent. The board also found that on the priority date of the application, the skilled person was aware that the leading and most widely employed anti-ulcer medicaments, ie anti-acids and H<sub>2</sub>-histamine receptor antagonists, were also effective against gastritis. While admitting that GGA represented a different class of anti-ulcer medicaments, the board considered this point as immaterial. In the board's judgment, what was decisive was the elucidation of the mechanism of action of GGA. The board held that GGA was known for the treatment of experimentally induced ulcer; its use for the preparation of a medicament for the treatment of gastritis did not involve any inventive merit (cf. chapter D.6.18).



### 5.3 Second (further) non-medical use

#### 5.3.1 Novelty criteria for non-medical use claims

##### (a) General issues decided in the decision of the Enlarged Board of Appeal

In general, the EPC allows both method claims and use claims, but whether any activity is claimed as a method of carrying out the activity (setting out a sequence of steps) or as the use of a thing for a stated purpose (the sequence of steps being implied) is a matter of preference. For the EPO there is no difference of substance (**G 5/83**, OJ 1985, 64).

Two referrals to the Enlarged Board raised the general issue of novelty of a second non-medical use which was not connected with the specific problems of use claims in the medical field.

In the non-medical field use claims are admissible and not subject to special conditions. In **T 231/85** (OJ 1989, 74) the board had to judge the novelty of a second non-medical use in a special constellation. It held that the fact that a substance was known could not preclude the novelty of a hitherto unknown use of that substance, even if the new use did not require any technical realisation other than that for a previously known use of the same substance. In the case in question the known use was use as a growth regulator and the new one, now claimed by the applicant, use as a fungicide. The technical realisation was in both cases the spraying of useful plants.

Later, the same board, with a different composition, referred to the Enlarged Board the question whether a claim for the use of a compound for a particular non-medical purpose was novel under Art. 54 EPC having regard to a prior publication which disclosed the use of that compound for a different non-medical purpose, so that the only novel feature in the claims was the purpose for which the compound was used. The specific problem in these cases was that the previously disclosed use of the substance, although specifically stated to be for another purpose, would **inherently** comprise the use as claimed in the new application (**T 59/87**, OJ 1988, 347) and **T 208/88** of 20.7.1988).

In decisions **G 2/88** (OJ 1990, 93) and **G 6/88** (OJ 1990, 114), the Enlarged Board stated that the patentability of a second non-medical use of a product was already recognised in principle in **G 5/83** which concerned the second medical use of a substance. However, in that earlier decision the exclusion from patentability of therapeutic and diagnostic methods had caused the Enlarged Board to allow only a special type of claim. These specific difficulties did not arise in the non-medical field; there the question was of a general nature, concerned primarily with the question of interpretation of Art. 54(1) EPC and Art. 54(2) EPC. In **G 2/88** and **G 6/88**, therefore, it was pointed out that a claimed invention lacked novelty unless it included at least one **essential** technical feature which distinguished it from the state of the art. A basic initial consideration, when deciding upon the novelty of a claim, was therefore to analyse it in order to determine its technical features. The Enlarged Board took the view that the proper interpretation of a claim whose wording clearly defined a new use of a known compound would normally be such that the attaining of a new technical effect on which the new use was based was a technical feature of the claimed invention. Thus, where the

## Novelty

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particular technical effect underlying such use was described in the patent, the proper interpretation of that claim would require a functional feature to be implicitly contained in the claim as a technical feature - eg the compound actually achieved the particular effect.

Referring to the facts of **T 231/85** (see above) as an example, the Enlarged Board explained that the claim directed to the use of a substance (known as a growth regulator) as a fungicide implicitly included a **functional** technical feature, namely that the said substance when used in accordance with the described means of realisation in fact achieved the effect (ie performed the function) of controlling fungus. The claim should not be interpreted literally as only including by way of technical features "the substance" and "the means of realisation of the claimed purpose", but should in appropriate cases be interpreted as also including as a technical feature the function of achieving that purpose, because that was the **technical result**. When determining novelty the decisive question of what had been made available to the public was one of fact in each case. A line had to be drawn between what was in fact made available and what remained hidden or had not otherwise been made available. In that connection the distinction between lack of novelty and lack of inventive step also had to be emphasised: information equivalent to a claimed invention may be "made available" (lack of novelty), or it may not have been made available but is obvious (novel, but lack of inventive step), or was not made available and is not obvious (novel and inventive). Thus, in particular, what is hidden may still be obvious. Under Art. 54(2) EPC the question was not what might have been "inherent" in what was previously made available to the public under the EPC. Under the EPC, the hidden or secret use, because it had not been made available to the public, was not a ground of objection to the validity of a European patent. In that respect, the provisions of the EPC might differ from the earlier national laws of some contracting states, and even from the current national laws of some non-contracting states. Thus, the question of "inherency" did not arise as such under Art. 54 EPC. Any vested right derived from prior use of an invention was a matter of national law.

The Enlarged Board thus concluded that with respect to a claim to a new use of a known compound, such new use might reflect a newly discovered technical effect described in the patent. The attaining of such a technical effect should then be considered as a **functional technical feature** of the claim (eg the achievement in a particular context of that technical effect). Had that technical feature not previously been made available to the public by any of the means set out in Art. 54(2) EPC, then the claimed invention was novel, even though such technical effect might have inherently taken place in the course of carrying out what had previously been made available to the public. The final decisions in cases **T 59/87** (OJ 1991, 561) and **T 208/88** (OJ 1992, 22) both held that the claimed use inventions were novel and inventive.

### (b) Non-therapeutic treatment of animals

In decision **T 582/88** the board applied the principles set out in decision **G 2/88** in slightly different circumstances. The invention's subject-matter was a method of non-therapeutic treatment of animals for the purpose of improving their milk production and comprising oral administration of a propionate-increasing amount of glycopeptide antibiotics. In the board's view the technical effect produced by the invention - in this case an improvement in milk production - was new and had to be construed as a new technical feature sufficient to make

the invention novel. The claim's subject-matter was a method of non-therapeutic treatment of animals, not - as in decision **G 2/88** - use of a known product to achieve a new effect.

(c) Non-therapeutic use distinguishable from the known therapeutic use

In **T 469/94** a European patent application on the basis of a set of claims directed to the protection of the second medical indication of choline or a choline derivative was refused by the examining division because it considered that the known treatment with choline of muscle diseases and hardness was equivalent to or even a synonym for the treatment for reducing muscle fatigue which was claimed in the application in suit. In response to a communication from the board, the appellant filed a new set of claims having the form of the protection of the second non-therapeutic use of a product.

Examining the case, the board concluded that the ability of choline to reduce the perception of fatigue had not been made available to the public. The first use of choline, in the therapeutic field, was known from two prior art documents. The board held that an independent invention could be based on the newly discovered effect if such an effect led to a new technical application which was clearly distinguishable from the previous known application. The prior art documents did indeed describe the use of choline on groups of patients having manifest diseases: either epilepsy or muscle diseases and injuries. Likewise in the case of the prophylactic use of choline envisaged in a prior art document for muscle rheumatism or muscle troubles arising from thyroidal diseases, the prophylaxis did not appear to mean the prevention of the disease itself, but simply the prevention of the acute phase of a chronic disease. The board observed that fatigue arising from major exercise was not of a pathological nature, and that the performance itself of major exercise appeared to be quite incompatible with the situations envisaged in the prior art documents, specifically that of muscle injuries. The non-therapeutic use of choline according to the invention was therefore independent of, and distinguishable from, the known therapeutic use because it was **directed to a distinct group of persons**. The subject-matter of the claim at issue was therefore found to be novel.

(d) Discovery of a new use of a known apparatus

In **T 15/91** the board ruled that, according to board of appeal case law, the discovery that known apparatus could be used in a manner not hitherto described did not substantiate the novelty of that apparatus if the hitherto unknown use did not require any modification to the technical design of the known apparatus (see **T 523/89**). In **T 215/84** the board held that the discovery that the known equipment might be used in a new manner could not render the entity itself novel. In **T 958/90** the board mentioned that a known effect could not be novel for the sole reason that the patent gives the information that it was present to a hitherto unknown extent.

In **T 637/92** the board held that according to established case law the statement of purpose of a claimed device (or product) was to be interpreted as meaning that the device was suitable for the stated purpose and that a known device that served another purpose but otherwise possessed all the features listed in the patent claim was not prejudicial to the novelty of the subject-matter of the claim if the known device was unsuitable for the purpose

## Novelty

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referred to in the claim (see Guidelines C-III, 4.8, and **T 287/86**, reasons, 2.2). In the case in question, however, these conditions had not been met since the device known from the citation did not possess one of the features of claim 1.

### (e) New use functional feature in a known process

In **T 848/93** the application claimed a process which differed from the prior art only in its use. The examining division had understood the claim to mean that the process claimed was suitable for the use described, and had considered that it lacked novelty because the process known in the prior art was also suitable for that use, even if this was not expressly stated.

The board did not agree: if a claim concerned e.g. an apparatus which differed from a known apparatus only as regards the use indicated, then the use was not an apparatus feature. This meant that the two pieces of apparatus were identical in terms of structure. If the known apparatus was suitable for the claimed use, the application lacked novelty. If the claim was directed to an object, a substance or a composition, the same applied. If however the claim was for a process, the situation was not comparable. In such a case, the use feature was a functional process feature comparable in category with the other features (steps) of the process. The teaching of **T 69/85** or Guidelines C-III, 4.8 was therefore not transferable to the present case.

### (f) Claim directed to the use of a known process for a particular purpose

In **T 210/93** the originally claimed process for the production of a rubber product was held not to be novel by the examining division because the claimed temperature range was already disclosed in D1. With reference to **G 2/88** and **G 6/88**, the applicants thereupon claimed the use of this known process for the purpose of preparing the rubber product having a certain maximum ratio of constituent X. They argued that in the absence of a disclosure of this mole ratio in D1, this constituted a "specific technical purpose of achieving the previously unknown chemical structural arrangement". The board observed that decisions **G 2/88** and **G 6/88** related to claims to the use of a known **compound** for a particular purpose, in contrast to the appellants' claim, which was directed to the use of a known **process** for a particular purpose, the purpose being the preparation of a particular product naturally resulting from such process. In the board's view, the use of a process for the purpose of preparing its product(s) could be said to be nothing but that very same process, and the scope of protection appeared to be the same for a claim to the process as such and a claim to such use.

### (g) Discovery of properties in a known product

In **T 279/93** a claim directed to the use of a first compound in a process for preparing a second compound was revoked by the opposition division for lack of novelty. In particular, the claims were directed to the use of the alkanolamines for reducing the formation of isomelamine impurities. According to the appellant, this purpose, even if it might have been inherently attained by following the teaching of a prior art document, should have rendered the subject-matter of the claims novel, since, in application of the reasoning in decision **G 2/88**, inherency did not destroy the novelty of the new use, which had to be regarded as a functional technical feature of the claims.

In the board's judgment, the use of a compound in a process for preparing another compound in order to reduce the formation of impurities was not necessarily a functional technical feature in the sense of decision **G 2/88**, and did not therefore in all circumstances confer novelty on the subject-matter of a claim containing it. The facts of the case at issue differed significantly from those underlying decision **G 2/88**, since the claim did not appear to contain any new technical effect or technical purpose in the sense required by that decision. In the board's view, noticing that an old product had the property of containing fewer isomelamine impurities was a mere discovery. To convert this into a patentable invention, and to show the characteristics of a new technical effect, the use referred to in the claim would have to be some new use of the product which exploited the discovery that the isomelamine impurities were low for some new technical purpose. However, the patent in suit disclosed no such new use; it did not teach the skilled person to do something which would not have been done without knowing the content of the patent. The patent merely gave the person skilled in the art reasons for preferring one known product over other known ones for the uses for which it had already been suggested

(h) Discovery of a new technical effect

In **T 892/94** (OJ 2000, 1) the board noted that according to **G 2/88** (OJ 1990, 93), novelty within the meaning of Art. 54(1) EPC could be acknowledged for a claim directed to the use of a known substance for a hitherto unknown, ie new, non-medical purpose reflecting a newly discovered technical effect. However, a newly discovered technical effect did not confer novelty on a claim directed to the use of a known substance for a known non-medical purpose if the newly discovered technical effect already underlay the known use of the known substance.

The disclosure in citation (1) was, in the board's judgment, prejudicial to the novelty of the claim in question. It was immaterial for the purposes of prejudice to novelty that the actual technical effect exhibited by "aromatic esters" in deodorising compositions was not described in the cited document. The ex post facto discovery that the deodorising effect of "aromatic esters" when used as an active ingredient in deodorising products could result from their capability of inhibiting esterase-producing micro-organisms might possibly be regarded as a (potentially surprising) piece of knowledge about the known use or application of such esters but could not confer novelty on a claim, since the latter would require that the newly discovered effect indeed ended in a new technical application or use of the "aromatic esters" which was not necessarily correlated with the known application or use and could be clearly distinguished therefrom.

In **T 706/95** the board held that the discovery that the same known means lead to an additional effect when they are used for the same known purpose (i.e. known use) of reducing the concentration of nitrogen oxides in the same effluent could not confer novelty to this known use.

In **T 189/95** the board ruled that a new property of a substance, ie a new technical effect, did not necessarily signal or give rise to a new use for that substance. For example, the new property might merely explain the mechanism behind the use already described in the prior art, as in **T 892/94** (OJ 2000, 1). Here again the board ruled that discovering a new property

or activity did not in itself render novel a claim for the use of a known substance for a known non-medical use, if the discovery only showed what formed the basis of the known use of the known substance.

In **T 1073/96** the board noted that under **G 2/88** (OJ 1990, 93) and **G 6/88** (OJ 1990, 114) novelty can only be acknowledged if the requirements as follows are met: (i) the claimed use as such was new, and (ii) if it reflected a newly discovered technical effect described in the patent. Concerning the question of whether the particular intended use stated in the claim at issue ("to provide an improved structural gum surface for a confectionery coating") reflected a technical effect that had not previously been made available to the public, the board found that it could not reasonably be considered based on or to reflect a technical effect described for the first time in the contested patent and, as such, could be distinguished from the known effects already described in (2) and (3) in association with the known use of PalatinitR. The finding that the known use of PalatinitR claimed in the patent in suit possibly resulted in an improved structural gum surface for a confectionery coating could merely be regarded as the *ex post facto* attempt to explain the known effects resulting from the known use of PalatinitR already disclosed in paragraph 1.3 of the document (3). The above considerations were, in the board's judgment, in line with the conclusions in decision **T 254/93** (OJ 1998, 285, see especially Reasons, point 4.8). A definite distinguishing technical feature, which confers novelty on the subject-matter of claim 1 within the meaning of Art. 54(1) EPC was not recognisable in the patent in suit.

#### 5.3.2 Statement of purpose in non-medical use claims

In **T 36/83** (OJ 1986, 295) the board stated that having discovered for the first time the surprising properties of a chemical product already known in the state of the art and having shown those properties in various uses, the applicant had the right to have those uses protected. In the particular case the uses were presented in the description as two methods: a method of medical treatment and a method of non-medical treatment. Under Art. 52(4) EPC a method of medical treatment was not patentable but a product for use in that method certainly was. Claims 1 to 7 had been worded accordingly. The method of non-medical treatment was one falling within the general field of patentable inventions. There could be no objection to the patentability of either use or method claims in general (see **G 5/83**). The applicants had chosen the phrase "use as a cosmetic product of thenoyl peroxide". The board considered that this form of claim was acceptable in the case in suit. The board noted that when considering the exclusions from patentability under Art. 52(4) EPC the wording of the claim was important. In reaching this conclusion the board held the use of the word "cosmetic" in the context of that application to be sufficiently precise to exclude therapeutic uses, without the need for a specific disclaimer of such uses.

#### 5.3.3 Disclosure of an equivalent article without an indication of the particular use claimed

In **T 523/89** a particular prior art document disclosed a container having all the structural features defined in claim 1 of the contested patent. Hence, the only outstanding issue was the fact that D1 nowhere indicated that the container disclosed therein was intended to be used for ice-cream. The board noted that the question of anticipation of a claim to an article for a particular use was dealt with in the Guidelines C-III, 4.8, and C-IV, 7.6, from which it was

clear that, with the exception of medical uses of known substances, the indication of intended use was only to be seen as limiting to the extent that the article had to be suitable for that use. In other words, disclosure of an equivalent article without an indication of the particular use claimed - although the article was nevertheless suitable for it - would cause lack of novelty of a claim to the article for that particular use. The board saw no reason to disagree with this general principle of interpretation laid down in the Guidelines.

## **D. Inventive step**

### **1. Introduction**

An invention is considered to involve an **inventive step** if, having regard to the **state of the art**, it is not **obvious** to a **person skilled in the art** (Art. 56 EPC, first sentence). The "state of the art" for the purposes of considering inventive step is as defined in Art. 54(2) EPC; it does not include later published European applications referred to in Art. 54(3) EPC (for full details see Guidelines, C-IV.9).

Technical progress is not a requirement for patentability under the EPC. Therefore, technical progress shown in comparison with marketed products as an alleged support for inventive step cannot be a substitute for the demonstration of inventive step with regard to the relevant closest state of the art (see **T 181/82** (OJ 1984, 401), **T 164/83** (OJ 1987, 149) **T 317/88** and **T 385/94**).

The extent of the monopoly conferred by a patent should correspond to and be justified by the technical contribution to the art. This general principle of law, applied in **T 409/91** (OJ 1994, 653) and **T 435/91** (OJ 1995, 188) (albeit to determine the scope of protection justified under Art. 83 EPC and Art. 84 EPC), also applies to decisions under Art. 56 EPC, because everything covered by a legally valid claim has to be inventive. Otherwise the claim has to be amended, by deleting anything obvious to ensure that the monopoly is justified (**T 939/92** (OJ 1996, 309), **T 930/94**, **T 795/93** and **T 714/97**).

### **2. Problem and solution approach**

To assess inventive step, the boards normally apply the "problem and solution approach". This consists essentially in (a) identifying the "closest prior art", (b) assessing the technical results (or effects) achieved by the claimed invention when compared with the "closest state of the art" established, (c) defining the technical problem to be solved as the object of the invention to achieve these results, and (d) examining whether or not a skilled person, having regard to the state of the art in the sense of Art. 54(2) EPC, would have suggested the claimed technical features for obtaining the results achieved by the claimed invention (see also Guidelines, C-IV, 9.5). The boards frequently cite R. 27(1)(c) EPC as the basis for the problem and solution approach. R. 27(1)(c) EPC requires that the invention be disclosed in such terms that the technical problem (even if not expressly stated as such) and its solution can be understood. Problem and solution are thus component parts of any technical invention. The problem and solution approach was primarily developed to ensure objective assessment of inventive step and avoid ex post facto analysis of the prior art.