

II. CONDITIONS TO BE MET BY AN APPLICATION

A. Sufficiency of disclosure

Art. 83 EPC stipulates that the application must disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

1. Parts of the application relevant for assessing sufficiency of disclosure

It has been consistent case law of the boards of appeal since at least **T 14/83** (OJ 1984, 105) that sufficiency of disclosure within the meaning of Art. 83 EPC must be assessed on the basis of the application as a whole - including the description and claims - (see also **T 169/83** (OJ 1985, 193)) and not of the claims alone (see eg **T 202/83**, **T 179/87** dated 16.1.1990, **T 435/89**, **T 82/90**, **T 126/91**).

In **T 32/84** (OJ 1986, 9) it was pointed out that the fact that certain elements of an invention essential to its operation were not referred to explicitly either in the claims, or in the relevant portion of the description nor shown in the drawing of the invention as claimed did not necessarily mean that the application did not disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art as required by Art. 83 EPC. In the case in question, a person skilled in the art could have put the invention into practice by applying a principle disclosed in the description which showed as essential to the invention an element shown not in the figure illustrating the invention as claimed, but in another figure in the application. This, however, only applied if he did not make use of additional teachings and no inventive step was involved.

2. Knowledge of skilled person relevant for assessing sufficiency of disclosure

(a) The disclosure is aimed at the skilled person.

The skilled person may use his common general knowledge to supplement the information contained in the application (**T 206/83** (OJ 1987, 5), **T 32/85**, **T 51/87** (OJ 1991, 177), **T 212/88** (OJ 1992, 28), **T 580/88**, **T 772/89**, **T 231/92**, **T 818/97**). He may even recognise and rectify errors in the description on the basis of such knowledge (**T 206/83** (OJ 1987, 5), **T 171/84** (OJ 1986, 95), **T 226/85** (OJ 1988, 336)). Textbooks and general technical literature form part of the common general knowledge (**T 171/84**, **T 51/87**, **T 580/88** and **T 772/89**). However, information which can only be obtained after a comprehensive search is not to be regarded as part of the common general knowledge (**T 206/83** and **T 654/90**).

Patent specifications cannot normally contribute to the sufficiency of the disclosure unless they are available to the skilled reader of the patent in question (**T 171/84**, OJ 1986, 95). By way of exception, however, patent specifications and scientific publications may be considered to form part of the common general knowledge where the invention is in a field of research so new that the relevant technical knowledge is not yet available from textbooks (**T 51/87** (OJ 1991, 177), **T 772/89** and **T 676/94**).

Finally, the same level of skill has to be applied when, for the same invention, the two questions of sufficient disclosure and inventive step are being considered (**T 60/89**, OJ 1992, 268) **T 694/92**, **T 187/93**, **T 412/93**).

(b) References may also enable the skilled person to carry out an invention.

For example, features not mentioned in the application documents themselves but in a document to which they refer may be incorporated into a patent claim if they unequivocally form part of the invention for which protection is sought. However, all the essential structural features thus disclosed which belong together must be incorporated into the claim; it is not permissible to single out a particular one (**T 6/84** (OJ 1985, 238)).

Where an invention relates to the improvement of prior art originally cited in the description of the invention, a feature described in broad terms in the cited document but not mentioned expressly in the invention is sufficiently disclosed if it is realised in the examples of the invention in the form of an embodiment also mentioned in the reference document (**T 288/84** OJ 1986, 128).

An invention is also sufficiently disclosed if reference is made to another document in the patent specification and the original description, and the skilled person can obtain from this cross-reference the information required to reproduce the invention but not disclosed in so many words in the description itself (**T 267/91**, **T 611/89**). This applies irrespective of the language in which it is drafted (see **T 920/92**, where the document referred to was in Japanese).

However, a reference to another document can only be taken into account if it was available to the relevant addressees of the document containing the reference. This means that the document referred to must be unambiguously identified and that the relevant addressees must have ready access to it. Whether or not this is so depends solely on the facts of the case. Neither Art. 123(2) EPC nor the Guidelines for Examination require or imply that a patent application referred to has to be identified by a number in order to be taken into account for the purposes of Art. 83 EPC (**T 737/90**).

The reference in **T 156/91** presented a special case. The contested patent related to a process involving the use of a catalyst whose composition and method of manufacture had been kept secret by the manufacturers. The board expressed doubts about the sufficiency of disclosure of an invention that could be carried out only with products whose method of manufacture was not disclosed but which were commercially available, although their availability was not guaranteed for any identifiable period. Since the process lacked inventive step, however, the board did not ultimately have to resolve the question of reproducibility.

3. Clarity and completeness of disclosure

It must be possible to reproduce a claimed step using the original application documents without any inventive effort over and above the ordinary skills of a practitioner (**T 10/86**). Where an applicant did not furnish details of the production process in the description in order to prevent the invention from being copied easily and the missing information could not be

supplied from the general knowledge of a person skilled in the art, the invention was held to be insufficiently disclosed (**T 219/85** (OJ 1986, 376)).

An invention is in principle sufficiently disclosed if at least one way is clearly indicated enabling the person skilled in the art to carry out the invention. If this is the case, the non-availability of some particular variants of a functionally defined component feature of the invention is immaterial to sufficiency as long as there are suitable variants known to the skilled person through the disclosure or common general knowledge which provide the same effect for the invention (**T 292/85** (OJ 1989, 275)). This has been confirmed by many decisions: **T 81/87** (OJ 1990, 250), **T 301/87** (OJ 1990, 335), **T 212/88** (OJ 1992, 28), **T 238/88** (OJ 1992, 709), **T 60/89** (OJ 1992, 268), **T 182/89** (OJ 1991, 391), **T 19/90** (OJ 1990, 476), **T 740/90**, **T 456/91** and **T 242/92**.

Moreover, according to **T 281/86** (OJ 1989, 202), there is no requirement under Art. 83 EPC that a specifically described example of a process must be exactly repeatable. Variations in the constitution of an agent used in a process are immaterial to the sufficiency of the disclosure provided the claimed process reliably leads to the desired products. As long as the description of the process is sufficiently clear and complete, ie the claimed process can be put into practice without undue burden by the skilled person taking his general knowledge into consideration, there is no deficiency in this respect (see also **T 292/85** (OJ 1989, 275), **T 299/86** (OJ 1988,88), **T 181/87**, **T 212/88** (OJ 1992, 28), **T 182/89** (OJ 1991, 391) and **T 19/90** (OJ 1990, 476)).

Fulfilling the requirement of R. 27(1)(e) EPC that the description shall describe in detail at least one way of carrying out the invention claimed, does not automatically mean that the application as filed is sufficiently disclosed in accordance with Art. 83 EPC. This has to be decided by appraising the information contained in the examples as well as other parts of the description in the light of the skilled person's common general knowledge at the relevant date (**T 322/93**). However, where the requirements of Art. 83 EPC are fulfilled, it follows that there is at least one way of carrying out the invention disclosed in accordance with R. 27(1)(e) EPC (**T 561/96**). In this decision, the fact that the examining division, despite an objection under Art. 83 EPC, nevertheless acknowledged novelty and inventive step, indicated to the board that the invention was unambiguously understandable for a skilled person and thus sufficiently disclosed.

However, the disclosure of one way of performing an invention is only sufficient if it allows the invention to be performed **in the whole range claimed** rather than **only in some** members of the claimed class to be obtained (**T 409/91** (OJ 1994, 653) and **T 435/91** (OJ 1995, 188)). This was considered a question of fact. Sufficiency of disclosure thus presupposes that the skilled person is able to obtain substantially **all** embodiments falling within the ambit of the claims. This was also the view taken by the board in decisions **T 19/90** (OJ 1990, 476), **T 242/92**, **T 418/91**, **T 548/91**, **T 659/93**, and **T 923/92** (OJ 1996, 564). More technical details and more than one example may be necessary in order to support claims of a broad scope (**T 612/92**, **T 694/92** (OJ 1997, 408), **T 187/93**). This must be decided on a case-by-case basis.

The objection of lack of sufficient disclosure also presupposes that there are serious doubts,

substantiated by verifiable facts (**T 19/90** (OJ 1990, 476)).

Where a disadvantage of an invention (in this case the risk of injury to users) could prevent its use, this is not an obstacle to reproducibility provided that the otherwise desired result is achieved by the technical teaching disclosed in the patent in suit (**T 881/95**).

In **T 449/90**, the board considered that the requirements of Art. 83 EPC had been satisfied where the claimed degree of inactivation ("substantially") of the Aids virus could be demonstrated with sufficient certainty. Complete inactivation of the life-threatening virus - which the opponent had argued was necessary - was indeed highly desirable, but not an issue under Art. 83 EPC, given the claim as worded.

4. Reproducibility without undue burden

The disclosure must be reproducible without undue burden.

Even though a reasonable amount of trial and error is permissible when it comes to sufficiency of disclosure, eg in an unexplored field or where there are many technical difficulties, the skilled person has to have at his disposal, either in the specification or on the basis of common general knowledge, adequate information leading necessarily and directly towards success through the evaluation of initial failures (**T 226/85** (OJ 1988, 336), following **T 14/83** (OJ 1984, 105), and **T 48/85** and **T 307/86**). Where the skilled person can only establish by trial and error whether or not his particular choice of numerous parameters will provide a satisfactory result, this amounts to an undue burden (**T 32/85**).

It suffices for the disclosure of an invention that the means intended to carry out the invention are clearly disclosed in technical terms which render them implementable and that the intended result is achieved at least in some, equally realistic, cases (**T 487/91**). The occasional failure of a process as claimed does not impair its reproducibility if only a few attempts are required to transform failure into success, provided that these attempts are kept within reasonable bounds and do not require an inventive step (**T 931/91**). Nor is reproducibility impaired if the selection of the values for various parameters is a matter of routine and/or if further information is supplied by examples in the description (**T 107/91**).

According to **T 256/87** all that has to be ensured is that the skilled person reading the specification will be able to carry out the invention in all its essential aspects and know when he is working within the forbidden area of the claims. The possibilities of indirect empirical investigation referred to in the specification were, in the board's view, an acceptable solution which sufficed to fulfil the requirements of Art. 83 EPC without undue burden.

There is no requirement in the EPC that the claimed invention may be carried out with the aid of only a few additional non-disclosed steps. The only essential requirement is that each of those additional steps be so apparent to the skilled person that, in the light of his common general knowledge, a detailed description of them is superfluous (**T 721/89**).

Experiments constitute an undue burden if they have first of all to find the solution to the problem and are not carried out just to determine the numerical limits of a functionally defined

range (**T 312/88**). They should quickly give a reliable picture of how the products can be produced or manufactured (**T 475/88**). However, it is not necessary for the experimental data filed with the patent in suit to be an exact repetition of the worked examples of the patent, as long as the experimental work can be regarded as being within the scope of the invention (**T 674/96**).

Where it is obvious that a skilled person would select a particular analytical measuring method, (none being disclosed in the patent), balancing its simplicity and convenience against the required accuracy, the requirements of Art. 83 EPC are met (**T 492/92**). This is the case even if the two different analytical methods proposed by the patentee give significantly different results with the same composition. However, where there are different measuring methods which do not always lead to the same result, this can amount to an undue burden, as in **T 225/93** (see also II.B.1.1.3).

5. Biotechnology

5.1 Clarity and completeness of disclosure

The principles elucidated under II.A. 3 above are also applicable to biological inventions.

5.1.1 The extent to which the invention must be reproducible

Decisions **T 281/86** (OJ 1989, 202), and **T 299/86** of 17.8.89 are dealt with in II.A. 3 above.

As stated above, an invention is sufficiently disclosed if at least one way is clearly indicated enabling the skilled person to carry out the invention (**T 292/85** OJ 1989, 275). The invention concerned a recombinant plasmid comprising a homologous regulon, heterologous DNA and one or more termination codons for expression in bacteria of a functional heterologous polypeptide in recoverable form. The application was refused by the examining division on the grounds that not all embodiments falling within the broad functional wording of the claims were available. The claims also embraced the preparation of future products, whereas they should be limited to what was available at the priority date. The board disagreed, holding that the non-availability of some particular variants was immaterial as long as there were suitable variants known which provided the same effect.

Similarly, in **T 386/94** (OJ 1996, 658) the patent specification provided a technically detailed example for the expression of preprochymosin and its maturation forms in *E. coli*. It suggested the possibility of expressing these proteins in micro-organisms in general. The board held that the invention was sufficiently disclosed because one way to carry out the invention was clearly indicated and the state of the art contained no evidence that foreign genes could not be expressed in organisms other than *E. coli*.

An invention may also be sufficiently disclosed where results are not exactly repeatable. In **T 301/87** (OJ 1990, 355) the invention provided a route through recombinant DNA technology to certain types of interferons but in a manner that would not provide identical results each time when repeated. The board concluded that variations in construction within a class of genetic precursors, such as recombinant DNA molecules claimed by a combination of

structural limitations and functional tests, were immaterial to the sufficiency of disclosure provided the skilled person could reliably obtain some members of the class without necessarily knowing in advance which member would thereby be made available.

However, if the essence of the invention is the achievement of a given technical effect by known techniques in different areas of application and serious doubts exist as to whether this effect could readily be obtained for the whole range of applications claimed, more technical details and more than one example may be required (see **T 612/92**, **T 694/92**, **T 187/93** and **T 923/92**, discussed in the next section).

An application may only be objected to for lack of sufficient disclosure if there are serious doubts, substantiated by verifiable facts. The mere fact that a claim is broad is not in itself a ground for considering the application as not complying with the requirement of sufficient disclosure under Art. 83 EPC (**T 19/90** OJ 1990, 476). In this case the claimed invention was defined by the incorporation of an activated oncogene sequence into the genome of non-human mammalian animals in general. The examining division refused the application on the grounds that in the light of the differences among different animals, it could not be assumed that the sole example given - mice - could be extended to all other non-human mammalian animals and the claims were thus unrealistically broad. The board disagreed.

Furthermore, even where the claims are supported by the description from a purely formal point of view, they may still not be considered allowable if they encompass subject-matter which in the light of the disclosure provided by the description can be performed only with undue burden or application of inventive skill. As for the amount of detail needed for a sufficient disclosure, this depends on the correlation of the facts of the case to certain general parameters, such as the character of the technical field and the average amount of effort necessary to put into practice a certain written disclosure in that technical field, the time when the disclosure was presented to the public and the corresponding common general knowledge, and the amount of reliable technical details disclosed in a document. (see **T 158/91** and **T 639/95**).

5.2.2 Reproducibility without undue burden

A number of factors contribute to a finding of undue burden.

In **T 187/93**, for example, there were experimental uncertainties in the patent application. The invention concerned a method for producing, by expression in eukaryotic cells, a truncated membrane-free derivative of a viral polypeptide, which provided protection in an immunised subject against in vivo challenge by a viral pathogen. Examples were only given of truncation of HSV glycoprotein gD. No general technique allowing extrapolation of the results to any other glycoprotein from any other virus were disclosed. The board found that the skilled person, when trying to obtain the same technical effect with a different glycoprotein would have experienced lack of predictability, which amounted to an undue burden.

Similarly, in **T 727/95**, the board found that the invention relied too much on chance. The claimed subject-matter included a "microorganism designated *Acetobacter* and having the ability of microorganisms ATCC 53264, ATCC 53263 and ATCC 53524 to ...". The board

observed that by including the phrase “having the ability of”, the claim covered not only *Acetobacter* microorganisms derived from the deposited strains, but also *Acetobacter* microorganisms which had the stated characteristics in common with the deposited strains. In the board's judgment, finding other stable, cellulose high-producing *Acetobacter* strains in nature was a chance event, and relying on chance for reproducibility amounted to an undue burden in the absence of evidence that such chance events occurred and could be identified frequently enough to guarantee success. The board concluded that the claim was not repeatable without undue burden over the entire breadth of the claim.

In **T 694/92** (OJ 1997, 408), incomplete guidance was given. The claimed subject-matter concerned a method for genetically modifying a plant cell. In fact, the board held that the experimental evidence and technical details in the description were not sufficient for the skilled person to reliably achieve, without undue burden, the technical effect of expression in any plant cell of any plant structural gene under the control of any plant promoter. Sufficient support for a claim broadly directed to such a method was not provided.

The claimed subject-matter in **T 639/95** concerned a method for producing PHB biopolymers in a host transformed with genes encoding the enzymes β -ketothiolase, acetoacetyl-CoA reductase and polyhydroxy butyrate (PHB) synthetase. The board found that the experimental plan for identifying and isolating the PHB gene was very general. Some references were missing and/or incomplete. There were no results and no details which could facilitate the repetition of the work. The board thus held that the total amount of experimental effort necessary to advance successfully step by step towards the desired final goal amounted to an undue burden for the skilled person.

However, in **T 412/93**, where errors and omissions prejudiced the reproducibility of one of the examples in toto and of another example in part, the reproducibility of the invention was not affected, as the examples were alternatives to previous ones.

In **T 612/92**, further scientific research would have been necessary in order to carry out the invention in some of the areas claimed. The claimed invention related to a method for incorporating foreign DNA into the genome of monocotyledonous plants via T-DNA. The patent suggested applying to monocotyledonous plants the same technique as known from the prior art for dicotyledonous plants. Examples of the transformation of two monocotyledonous species were given, but no new technique was suggested, nor were any indications given of any adaptations necessary to make the known method work in monocotyledonous species. Later work resulted in lack of success in other monocotyledonous species. The board held the requirements of Art. 83 EPC were not fulfilled because there were serious doubts as to whether such a method could be performed over the whole range that was claimed. See also **T 694/92** (OJ 1997, 408) above.

In **T 772/89** the board considered whether the description contained a disclosure that enabled a skilled person to prepare the two kinds of host claimed, that is, a host suitable for cloning and a host suitable for expressing a genomic bovine growth hormone sequence. The board held that the disclosure was insufficient in respect of the second kind of host, as the skilled person could not have found suitable expression hosts in a straightforward manner at the priority date.

However, in **T 223/92** the board rejected an objection by the appellant (opponent) that the provision of a DNA sequence coding for human interferon-gamma was in itself not sufficient and that it amounted to an undue burden for the skilled person to repeat the invention on the basis of this knowledge. The board was well aware of the fact that even with the full disclosure of the DNA sequence, reproducibility of the whole process of expressing the gene to produce the desired interferon gamma was still a difficult, complex and time - consuming task in 1981. Nonetheless, the board was convinced that the provision of the DNA sequence in 1981 enabled those skilled in the art to reproduce the invention, possibly in a time - consuming and cumbersome way, but, in the given circumstances, without undue burden of experimentation and without needing inventive skill. (See also **T 412/93**).

5.3 Deposit of living material

According to R. 28 EPC, if an invention concerns a microbiological process or the product thereof and involves the use of a micro-organism which is not available to the public and which cannot be described in the European patent application in such a manner as to enable the invention to be carried out by a person skilled in the art, the invention shall only be regarded as being disclosed as prescribed in Art. 83 EPC if a culture of the micro-organism has been deposited with a recognised depository institution within a given time limit.

5.3.1 Substantive questions

In decision **T 418/89** (OJ 1993, 20) the board had to decide whether the deposited hybridoma enabled the skilled person to carry out the invention as claimed. The board found that the characteristics of the monoclonal antibodies produced by the deposited strain were different from those mentioned in the claims and that it was not possible to produce monoclonal antibodies from the deposited hybridoma using techniques recommended by the depository institution. The requirements of Art. 83 EPC were thus not met. A disclosure could not be regarded as sufficient if and when it was only possible to reproduce the invention after repeated requests to the depository institution and by applying techniques considerably more sophisticated than those the latter recommended. Nor could the scope of the patent be restricted to what had been deposited, as the characteristics of the deposit differed from the written disclosure in the patent. The true characteristics of the monoclonal antibodies produced by the deposited hybridoma were nowhere described and thus not available to the public. Thus a mere deposit of a hybridoma without any corresponding written description did not provide a sufficient disclosure. Similar conclusions were reached in decisions **T 495/89** and **T 498/94**.

In **T 349/91** the board held that an application was not sufficiently enabling where a laborious screening process was necessary to produce a hybridoma cell line secreting an antibody corresponding to a specific deposited antibody.

However, R. 28(1) EPC cannot be interpreted such that there is an obligation to deposit material to facilitate the reproduction if the invention can be repeated on the basis of the written description, even if this should be a much more cumbersome way than by merely growing the deposited micro-organism (**T 223/92**).

Similarly, in **T 412/93** the board stated that the need for a deposit cannot be introduced by reference to the concept of undue burden. This concept relates more to cases where the route that the reader is to follow is so poorly marked that success is not certain such as in **T 418/89** (see above). If the road is certain but long and labourious, the patentee is under no obligation to assist the disclosure by making actual physical samples available. The board felt that to come to the opposite conclusion would be effectively to introduce a requirement to make the best mode immediately accessible to the public, and such a requirement is not part of the European patent system.

With respect to the question whether the reproducibility of specific micro-organisms (eg plasmids or viral strains) was assured by the written description in the absence of a deposition, the board, after careful examination of the written disclosure, held in some cases that the information provided in the application was sufficient to lead the skilled person reliably to the same micro-organisms (**T 283/86**, **T 181/87**); in other cases it was not (**T 815/90**, **T 816/90**).

5.3.2 Procedural questions

(a) Identity of applicant and depositor

The previous EPO practice established by **T 118/87** (OJ 1991, 474) that the patent applicant and depositor must, in principle, be one and the same has been changed by the insertion of a sub-paragraph (d) into R. 28(1) EPC. Now biological material **may be deposited by a person other than the applicant** if the name and address of the depositor are stated in the application and a document is submitted satisfying the EPO that the latter has authorised the applicant to refer to the deposited biological material in the application and has given his unreserved and irrevocable consent to the material being made available to the public in accordance with R. 28 EPC.

(b) Deficiency in deposit

R. 28(1) EPC stipulates that a culture of the micro-organism must have been deposited with a recognised depository institution not later than the date of filing of the application.

T 39/88 (OJ 1989, 499) affirmed the principle that one important purpose of R. 28 EPC is to make the availability of the deposited organisms independent of any consent by the depositor. The board observed that the proper way of bringing a deposit originally filed for another purpose (here a US application) into line with the requirements of the EPC system was to formally convert the deposit into a deposit under R. 28 EPC (in the case of a deposit made on the basis of a special agreement between the EPO and the depository institution) or into a deposit under the Budapest Treaty (which automatically covers R. 28 EPC), as the case might be. See also decisions **T 239/87**, **T 90/88** and **T 106/88**.

(c) Late submission of deposit number

According to R. 28(1)(c) EPC, the application must state the depository institution and the file number of the culture deposit. In decision **G 2/93** (OJ 1995, 275) the Enlarged Board of

Appeal held that the provisions of R. 28 EPC were subordinate to the requirements of Art. 83 EPC. The indication of the file number (accession number) of a culture deposit in a patent application was substantive because, under the EPC, it was instrumental in enabling a person skilled in the art to carry out the invention. The Enlarged Board therefore held that, contrary to the ruling in **J 8/87** (OJ 1989, 9), the information concerning the file number may not be submitted after expiry of the time limit set out in R. 28(2)(a) EPC (ie sixteen months after the date of filing of the application or, if priority is claimed, after the priority date).

See **T 227/97** (OJ 1999, 495) for the board's decision that reestablishment of rights may be available for the time limit set by R. 28(2)(a) EPC and R. 13bis.4 PCT.

6. The relationship between Article 83 EPC and Article 84 EPC

6.1 Article 83 EPC and support from the description

The patent claims must clearly define the subject-matter for which protection is sought under Art. 84 EPC. In **T 94/82** (OJ 1984, 75) it was held that this requirement was fulfilled in a claim to a product when the characteristics of the product were specified by parameters relating to the physical structure of the product, provided that those parameters could be clearly and reliably determined by objective procedures which were usual in the art. In such a product claim, it sufficed to state the physical properties of the product in terms of parameters, since it was not mandatory to give instructions in the claim itself as to how the product was to be obtained. The description, however, had to fulfil the requirements of Art. 83 EPC and thus enable the person skilled in the art to obtain the claimed product described in it (see also **T 487/89**, **T 297/90** and **T 541/97**).

It is of relevance whether a problem falls within Art. 83 EPC or Art. 84 EPC, as examination in respect of the requirements of Art. 83 EPC is still permitted during opposition proceedings, whereas in respect of Art. 84 EPC it is limited during opposition proceedings to those cases where there has been an amendment (**T 127/85** (OJ 1989, 271), see also **T 301/87** (OJ 1990, 335, reasons, 3)). For examination in respect of Art. 84 EPC during opposition proceedings see p. 484.

In **T 292/85** (OJ 1989, 275) the stated grounds for the refusal were that the disclosure was not sufficient under Art. 83 EPC and there was consequently a lack of proper support under Art. 84 EPC. The board pointed out that in appropriate cases it is only possible to define the invention (the matter for which protection was sought, Art. 84 EPC), in a way which gives fair protection having regard to the nature of the invention which had been described by using functional terminology in the claims. The need for fair protection governs both the considerations concerning the scope of claims and the requirements for sufficient disclosure. The board found that an invention is sufficiently disclosed if at least one way is clearly indicated enabling the skilled person to carry out the invention.

In **T 409/91** (OJ 1994, 653) (ex parte proceedings) and **T 435/91** (OJ 1995, 188) (inter partes proceedings) it was pointed out that the protection conferred by a patent should correspond to the technical contribution to the art made by the disclosure of the invention described therein, which excludes the patent monopoly being extended to subject-matter which, after

reading the patent specification, would still not be at the disposal of the skilled person. The available information must enable the skilled person to achieve the envisaged result within the whole ambit of the claim containing the respective functional definition without undue difficulty, and the description with or without the relevant common general knowledge must provide a fully self-sufficient technical concept as to how this result is to be achieved.

The invention at issue in **T 409/91** related to mineral oils containing paraffin wax such as diesel fuel. In the description of the application in suit the use of certain additives was presented as an essential constituent of the fuel oil composition, but this feature was missing in the claims. The board found that the claims defined some other invention which was not supported by the description.

In the inter partes case **T 435/91** (OJ 1995, 188), one of the essential technical features of claim 1, an additive which forced a detergent composition into the hexagonal liquid crystal phase, was defined only by its function. The patentee admitted that it was not possible to identify, on the basis of the information contained in the patent specification or of common general knowledge, compounds other than those specifically mentioned as bringing about the desired effect. The board was of the opinion that the compositions must all be available to the skilled person if the definition was to meet the requirements of Art. 83 EPC.

However, as long as there are no concrete grounds for believing that the invention cannot be carried out within the whole range claimed, there is no reason for not allowing more broadly based claims in an application (**T 242/92**, **T 484/92**). In opposition proceedings the opponent bears the burden of proving that the invention cannot be carried out within the whole range claimed (**T 418/91**, **T 456/91**, **T 548/91**).

6.2 Article 83 EPC and clarity of claims

When undefined parameters are used in the claims and no details of the measuring methods are supplied, the question arises whether there is a problem with respect to Art. 83 EPC or Art. 84 EPC. The answer to this question is important because in opposition proceedings the patent can be examined for compliance with Art. 83 EPC without restriction. Examination for compliance with Art. 84 EPC is limited to cases where there has been an amendment.

In some decisions (**T 123/85**, **T 124/85**, **T 172/87**, **T 358/88**, **T 449/90**, **T 148/91**, **T 267/91**, **T 697/91**, all inter partes proceedings) the absence of information in the application on methods for measuring undetermined parameters in the application was considered a problem with respect to Art. 83 EPC. This problem was also addressed with reference to Art. 83 EPC in two ex parte proceedings, (**T 122/89** of 5.2.1991 and **T 503/92**). In **T 860/93** (OJ 1995, 47), also ex parte proceedings, it was decided that the absence of methods for measuring a relative quality in the claim was a problem with respect to the clarity of the claim under Art. 84 EPC (see also **T 230/87**, **T 176/91**, **T 917/92**).

In **T 1055/92** (OJ 1995, 214) the examining division had rejected the patent application under Art. 84 EPC because **in the claim** it was not clear how certain values were to be computed. The board held that the requirements of Art. 84 EPC, that the claims shall define the matter for which protection is sought, should be clearly distinguished from the requirement under Art.

83 EPC that the European patent application must disclose the invention in such a way that it enables a person skilled in the art to carry out that same invention. Under Art. 83 EPC, sufficient disclosure is required of a European patent application, ie of the application as a whole, comprising the claims, together with the description and the drawings, but not of an individual claim as such. A claim, on the other hand, must comprise the essential features of the invention; the essential features should comprise those features which distinguish the invention from the closest prior art. The primary function of a claim is to set out the scope of protection sought for an invention, which implies that it is not always necessary for a claim to identify technical features or steps in detail.

7. Evidence

In order to establish insufficiency, the burden of proof is upon an opponent to establish on the balance of probabilities that a skilled reader of the patent, using his common general knowledge, would be unable to carry out the invention (**T 182/89**, OJ 1991, 391). A mere statement that one of several examples in a patent has been repeated once "exactly as described" without obtaining exactly the results claimed in the patent is in principle inadequate to discharge that burden (see also **T 406/91**, **T 418/91**, **T 548/91** and **T 588/93**). For more details see the chapter on the burden of proof, p. 350 et seq.

As proof that an invention has been insufficiently disclosed, the boards require that the attempt to repeat it must fail despite following the conditions given in the examples. This requirement is not fulfilled where the opponent repeats the patented process under conditions covered by claim 1 but differing in many respects from those applying in the contested patent's examples (**T 665/90**).

An invention should be reproduced using the examples given. Insufficiency cannot be proven on the basis of laboratory trials when the only embodiment exemplified in the patent is an industrial fermentation process (**T 740/90**). The disclosure was also considered sufficient where the opponent had only used equivalents of the surfactants given in the patent, as he had not discharged his burden of proof (**T 406/91**).

B. Claims

Art. 84 EPC lays down the relevant principles governing the content and wording of the claims, providing that claims should be clear and concise and be supported by the description. It is supplemented by R. 29 EPC.

As explained in decision **G 2/88** (OJ 1990, 93, corr. 469), Art. 84 EPC provides that the claims of a European patent application "shall define the matter for which protection is sought". R. 29(1) EPC further requires that the claims "shall define the matter for which protection is sought in terms of the technical features of the invention". The primary aim of the wording used in a claim must therefore be to satisfy such requirements, having regard to the particular nature of the invention, and the purpose of the claims. The purpose of claims under the EPC is to enable the protection conferred by the patent (or patent application) to be determined (Art. 69 EPC), and thus the rights of the patent owner within the designated

contracting states (Art. 64 EPC), having regard to the patentability requirements of Art. 52 EPC to Art. 57 EPC. There are basically two different types of claim, namely a claim to a physical entity (eg product, apparatus) and a claim to a physical activity (eg method, process, use). These two basic types of claim are sometimes referred to as the two possible "categories" of claim. Within the above two basic types of claim various sub-classes are possible (eg a compound, a composition, a machine; or a manufacturing method, a process of producing a compound, a method of testing, etc.). Furthermore, claims including both features relating to physical activities and features relating to physical entities are also possible. There are no rigid lines of demarcation between the various possible forms of claim. The technical features of the invention are the physical features which are essential to it. The technical features of a claim to a physical entity are the physical parameters of the entity, and the technical features of a claim to an activity are the physical steps which define such activity.

G 2/88 was followed by the board of appeal in **T 337/95** (OJ 1996, 628), which confirmed that claims had to be clear for the sake of legal certainty, as their purpose was to enable the protection conferred by the patent to be determined (see also **T 338/95**).

1. Clarity

1.1 Text of the claims

1.1.1 General principles

The protection sought should normally be indicated in the claims by technical features (see **T 4/80**, (OJ 1982, 149)). Furthermore the claims, per se, must be free of contradiction (see **T 2/80**, (OJ 1981, 431)).

Moreover, in decision **T 165/84** it was considered that the claims lacked clarity if the exact distinctions which delimited the scope of protection could not be learnt from them. Similarly, in **T 480/98** the board considered that a trade mark product referred to in the characterising portion of Claim 1 did not have a clear technical meaning, in that it could refer to a plurality of products having different compositions and properties. In consequence there was a lack of clarity, and the claim was not allowable.

In decision **T 94/82** (OJ 1984, 75) the board ruled that the requirement of clarity could be fulfilled in a claim to a product if the characteristics of the product were specified by parameters related to the physical structure of the product, provided that those parameters could be clearly and reliably determined by objective procedures which were usual in the art (see also **T 452/91**).

However, complexity as such is not equivalent to a lack of clarity - clarity under Art. 84 EPC is not at stake in a case of mere complexity of a claim provided the subject-matter for which the protection is sought and the scope thereof are clear and unambiguous for a person skilled in the art, either per se or in the light of the description (**T 574/96**).

In addition, the boards established two further general principles with regard to the

requirements to be met by the text of the claims - in **T 150/82** (OJ 1984, 309) the board ruled that claims relying on references to the description in the specification in respect of all their technical features (so called "omnibus claims") were unallowable as contrary to R. 29(4) EPC and R. 29(6) EPC, unless absolutely necessary, eg when a plurality of conditions would not lend themselves to verbal expression without such a reference. Examples of such exceptions included inventions containing features or limitations which could only be expressed by means of drawings or graphs defining a particular shape or a plurality of conditions.

In case **T 271/88** the board upheld **T 150/82** and decided that it was not possible to base claims on an appendix showing structural chemical formulae designated as "chemical formulae incorporated within claims". The board held that it was quite evident that the terms "description" and "drawing" in R. 29(6) EPC were meant to cover structural chemical formulae. This interpretation was not affected by the terminology employed in the Guidelines, which dealt with the meaning of other rules; nor could much help be derived in construing R. 29(6) EPC on the basis of the express wording of R. 35(11) EPC. The mere fact that references to structural chemical formulae on separate sheets were accepted and even required by some national patent offices of the contracting states could not be relevant, let alone decisive, to the interpretation of the EPC. There was not much difference between reliance on references to the description and reliance on references to a separate sheet.

On the other hand, in **T 237/84** (OJ 1987, 309), the board stated that the purpose of reference signs in a claim (R. 29(7) EPC) was to make the claims easier for all to understand. They did not limit the scope of the claim but did affect its clarity and might enable it to be expressed more concisely than would otherwise be possible. In **T 986/97** the board allowed a reference to the drawings.

In decision **T 816/90** plasmids were defined by use of a designation which had no technical meaning per se. Moreover, their structure was defined by reference to a figure. The board was of the opinion that such a definition of a plasmid was contrary to the requirements of Art. 84 EPC and therefore could not be accepted.

1.1.2 Essential features

In **T 115/83** and **T 32/82** (OJ 1984, 354) it was stated that Art. 84 EPC had to be interpreted as meaning not only that a claim had to be comprehensible from a technical point of view, but also that it had to define clearly the object of the invention, that is to say indicate all the **essential** features thereof. All features which were necessary for solving the technical problem with which the application was concerned had to be regarded as essential features. Both decisions were confirmed in **T 269/87** and **T 409/91** (OJ 1994, 653).

In **T 409/91** the invention related to mineral oils containing paraffin wax such as diesel fuel. The inventors found that waxy fuels having wax crystals of sufficiently small size at low temperatures to pass through paper filters used in diesel engines could be obtained by using additives with a structure described in the application by a general formula. The claims did not mention the additives.

The board held that the claims did not define the matter for which protection was sought by

reference to **all** its essential technical features as required by Art. 84 EPC, first sentence: in the description of the application in suit the use of certain additives was presented as an essential constituent of the fuel oil composition. As this feature was missing in the claims, the board found that they defined some other invention which was not sufficiently disclosed. The board further held that the requirement that the claims be supported by the description (Art. 84 EPC, second sentence) reflected the general legal principle that the extent of a patent monopoly, as defined by the claims, should correspond to the technical contribution to the art. Claims should not therefore extend to subject-matter which would still not be at the disposal of a skilled person after reading the description. Consequently, a technical feature described and highlighted in the description as being an essential feature of the invention also had to be part of the claims.

The board's opinion in **T 32/82** was also confirmed in **T 622/90**, where it was held that lack of clarity could be caused not only by the presence of an ambiguous feature, but also by the absence of a feature which was necessary for clarity (see also **T 630/93** in 1.1.3 below (p. 160)).

In **T 586/97** the claim directed to an aerosol composition mentioned the feature 'active ingredient', which was neither defined in the description nor was a generally applicable qualitative definition known. The applicant's argument that the active ingredient was there to satisfy the function of the composition could not overcome the board's clarity objection, because this intended function was no technical feature characterising the claimed composition.

1.1.3 Clarity of broad claims

It was stated in decision **T 238/88** (OJ 1992, 709) that the clarity of a claim is not diminished by the mere breadth of a term of art (eg "alkyl") contained in it, if the meaning of such term - either per se or in the light of the description - is unambiguous for a person skilled in the art. (With regard to the problem of the interpretation of claims in general, see p. 168 et seq.).

In **T 523/91** the board held that the wording "plastics in combination with inserts" and "this insert is combined with the plastics granules in a wound or folded manner" did not cause the subject-matter of the claim to be unclear within the meaning of Art. 84 EPC. Although the nature of the combination covered many possibilities, the resulting subject-matter of the claim was broad rather than unclear. The broadness of a claim could not be contested on its own but only in conjunction with other criteria such as novelty, inventive step or reproducibility.

Likewise in **T 688/91** the board stated that a broad claim was not to be equated with one lacking clarity. In this instance the claim was worded as follows: "Integrated microprogrammed apparatus ... with apparatus to generate the T-states T0 ..., T1 ..., ... characterised in that ... the generation both of the T-states T0, T1 ... and of the further T-states ... is in each case effected as a function of preceding T-states and of state parameters **such as** the instantaneous values of state and/or mode signals and ...". The board held that, even if the words "such as" were understood to mean "for example", with the result that the subsequent information was not to be interpreted in a restrictive sense, the words "state parameters" were clear in as much as they conveyed the fact that T-state generation was to

be effected as a function of any parameters representing one of the states of the apparatus. Although the claim was to be regarded as broad, since the terms used were open to general interpretation, breadth was not to be equated with an absence of clarity.

In **T 630/93** the board noted that Art. 84 EPC, first sentence, implied that it was not always necessary for a claim to identify technical features or steps in full detail. The function of the essential features, although normally expressed in technical terms, was often to define the borders of an invention rather than details of the invention within those borders. Thus, essential features could often be of a very general character and in extreme cases indicate only principles or a new idea (see also chapter "Sufficiency of disclosure").

1.1.4 Categories of claim

In the aforementioned decision **T 688/91** the board found that the fact that claims of different categories were deemed to be independent claims did not preclude reference to other independent claims. In the board's view, however, any such reference had to make perfectly clear whether or not the reference was intended to replace features. In the former case, it had for reasons of clarity to replace **all** the features, and in the latter case none.

In decisions **T 418/92** and **T 453/90** the boards confirmed that it was possible for claims to relate to both physical activities and physical entities, in particular where the inventions concerned were fully disclosed as processes to the skilled person only if apparatus features were also included in the definition.

In **T 426/89** (OJ 1992, 172) the board decided that a claim relating to a "method for operating" a device was not "clear" (Art. 84 EPC) if the claimed features only described how the device worked.

In **T 841/95** the board found that where a claim for an apparatus sought to define the invention by reference to features of the use to which the apparatus was to be put, a lack of clarity could result. However, if the subject-matter of the application was an apparatus and it was not viable to define the apparatus other than by reference to the said use, an apparatus claim directed to a combination of apparatus and use and defining the apparatus unambiguously could be clear.

In case **T 410/96** concerning a data processing system the question arose whether it was permissible for a claim to a system to refer back to a claim to a method. The examining division had refused the application on the ground that such a claim was an independent claim and must therefore define all the essential features of the invention. The board held that, although R. 29(4) EPC mentioned a reference only in the context of a claim including all the features of the claim it referred to, this did not imply a contrario that a reference which did not fulfill this condition was necessarily impermissible. The board found that there was no a priori objection under Art. 84 EPC to an independent claim which partially drew its features from preceding claims of a different category. The essential features were thus incorporated in the disputed claim by reference, the claim thus complying with R. 29(3) EPC.

1.2 Exceptions to the principles

Exceptions to these principles have been permitted for practical reasons and under certain circumstances claims granted which contained features in the form of disclaimers and functional or unspecified features.

1.2.1 Admissibility of disclaimer

(a) General

In accordance with decision **T 4/80** (OJ 1982, 149), disclaimers are admissible if the subject-matter remaining in the claim cannot technically be defined directly more clearly and concisely.

This principle was confirmed in decision **T 433/86** and the cases where disclaimers are applied were specified in greater detail: when there is an overlap between the prior art and the claimed subject-matter defined in generic terms, a specific prior art may be excluded even in the absence of support for the excluded matter in the original documents. Such an exclusion may be achieved by way of a disclaimer or, preferably, in positive terms if this leads to clearer and more concise language. See also **T 173/96**.

The same principles apply when a smaller partial area of the generally defined subject-matter of the invention is to be excluded not in view of the state of the art but because it does not solve the technical problem (see **T 313/86**, **T 623/91** and **T 1050/93**).

However, in **T 323/97** (OJ 2002, ***) the board held that an amendment to a patent by the introduction of a “negative” technical feature into a claim resulting in the exclusion of certain embodiments was, regardless of the name “disclaimer”, none the less an amendment governed by Art. 123(2) EPC and Art. 123(3) EPC.

By way of obiter dictum, the board added that the practice of permitting disclaimers having no support in the application as filed to make a claimed subject-matter novel by delimiting it against an accidental anticipation could not be maintained in the light of the Enlarged Board of Appeal's opinion **G 2/98** (OJ 2001, 413).

Any amendment of a claim not having support in the application as filed and aiming at distancing the claimed subject-matter further from the state of the art, in particular by way of a disclaimer, contravened Art. 123(2) EPC.

In **T 124/90**, where the excluded subject-matter reflected an enabling aspect of the disclosure, the board allowed the disclaimer even though its terms were more comprehensive than the specific prior art excluded.

However, a disclaimer introduced in order to establish novelty should exclude only that subject-matter which is disclosed in the state of the art (**T 434/92**, **T 653/92** and **T 426/94**).

In **T 11/89** the board held that claims containing a disclaimer should clearly have shown the

Claims

technical features by which the claimed subject-matter was distinguished from the excluded subject-matter. The publication number of a patent specification was obviously not a technical feature and was therefore not appropriate for determining the scope of a disclaimer. The claim in question was of the type "X-derivatives of the general formula I ... with the exception of the X-derivatives of the general formula I disclosed in patent specification N°...".

(b) Novelty and inventive step

In **T 188/83** (OJ 1984, 555) the board made it clear that the range was not rendered novel by the fact that the values calculated from the examples described in a citation were accepted by means of a disclaimer if these values could not be regarded as individual.

In **T 170/87** (OJ 1989, 441) the board established that a disclaimer could render new an inventive teaching which overlapped the state of the art, but could not impart inventive step to a teaching which was obvious (see also **T 857/91** and **T 710/92**).

In **T 597/92** (OJ 1996, 135) the board confirmed this, stating that there was no basis in the EPC for the substantiation of inventive step by way of a disclaimer. This method might only be used by way of exception for avoiding anticipation, if the subject-matter of a claim could not be restricted on the basis of the original disclosure in positive terms without unduly impairing its clarity and conciseness. A hypothetical novelty attack in possible proceedings before a national court, unsupported by pleadings or evidence on file before the EPO, was not a sufficient reason under the EPC for allowing a disclaimer. This decision was confirmed in **T 653/92**.

(c) Application to ranges

In **T 623/91** the board stated that the effect relied upon for patentability had to operate throughout the whole range of compositions being claimed and if the evidence before the board showed that this was not the case, albeit only in a minority or an extremely small proportion of instances, the compositions which did not provide the effect had to be disclaimed. The board concluded that the exclusion of a composition by reference to the trade mark or trade designation would not introduce uncertainty and therefore not offend against Art. 84 EPC, as changes in the range of chemical composition would not be likely without a corresponding change in the trade name or trade mark.

1.2.2 Broad claims

(a) Functional features

In **T 68/85** (OJ 1987, 228) the board found that functional features defining a technical result were permissible in a claim if, from an objective viewpoint, such features could not otherwise be defined more precisely without restricting the scope of the invention, and if these features provided instructions which were sufficiently clear for the expert to reduce them to practice without undue burden, if necessary with reasonable experiments. The board further pointed out that the effort to define a feature in functional terms had to stop short where it jeopardised the clarity of a claim as required by Art. 84 EPC. The following decisions agreed with these

findings: **T 139/85**, **T 292/85** (OJ 1989, 275), **T 293/85**, **T 299/86** (OJ 1988, 88), **T 322/87**, **T 418/89** (OJ 1993, 20), **T 707/89**, **T 752/90**, **T 822/91**, **T 281/92**, **T 488/92** and **T 104/93**.

T 332/87 offers an interpretation of the Guidelines C-III, 4.8 where it is said that a claim directed to a product for a particular use has to be construed as defining a product suitable for this use. According to the board this meant only that it might be admissible in appropriate cases to introduce functional language into a claim for defining a product. However, a product defined inter alia by means of a functional feature could only be considered as novel if this functional feature differentiated the product in substance from known products.

In **T 361/88** the board distinguished between two types of functional feature as follows: "... the first type of functional feature is related to process steps which are known to the man skilled in the art and may easily be performed in order to obtain the desired result ... the second type of functional feature consists of process steps defined by the result which is aimed at. This is also allowable as long as the man skilled in the art knows, without exceeding his normal skills and knowledge, what he has to do in order to obtain said result. Another situation arises if said result is obtained for the first time, in which case the man skilled in the art does not know how to achieve the result."

In **T 243/91** it was stated that a functional feature was allowable if that feature provided a clear instruction to a skilled person to reduce it to practice without undue burden. In **T 893/90** the feature "being present in amounts and proportions just sufficient to arrest bleeding" was held to be a functional feature which defined a technical result which also constituted a testable criterion to be satisfied by the claimed pharmaceutical composition. Because such testing involved only routine trials, the adopted functional language was allowable. The introduction of a reference to specific amounts and/or proportions of the components would limit the claim and was not necessary.

The situation in **T 893/90** was distinguished from the one before the board in **T 181/96**. Although in the former case the testing might appear prima facie bothersome, it was nothing out of the ordinary for the field of medicine, involving only routine trials, so no limitation was necessary. In the case in suit, however, which concerned an apparatus for hydrostatically testing a sealing element of a threaded connection between two connected sections of pipe, there was no general type of pipe connections with generally well-defined ranges of dimensions which were thus generally available for verification of the functional features as such.

In **T 446/90** a mixing step was defined in a claim by the result to be achieved, namely obtaining a dense packing of particles B, the definition of the latter being a theoretical, idealised scientific model, such models being well known. The reference to this theoretical model could be understood by the skilled person on the basis of the further information given in the patent in suit, and at least one indirect method suitable for testing the density of the packing had been disclosed in the description. Under these circumstances the definition of the mixing conditions by the result to be achieved was held by the board to be clear. The board noted that the incorporation into the claim of the mixing conditions described in the examples would unduly limit the scope of protection and was therefore not appropriate.

In case **T 720/92** the application was refused inter alia because claim 1 was held not to be clear since it used the obscure terms "metal promoted oxidation" and "oxidizable organic polymer"; the indication of a maximum oxygen permeance was considered a definition by the result to be achieved which could not represent a technical feature. The board disagreed, holding that the term "clarity" in Art. 84 EPC referred to the practical meaning of the language of the patent claims. Claims with functional features which did not enable the skilled person to carry out the invention in the light of the disclosure and on the basis of common general knowledge did not meet the requirement of clarity according to Art. 84 EPC. However, a claim combining functional definitions limited to features, which a skilled person would have had no difficulty in determining on the basis of common general knowledge, and a structural definition of the essential contribution to the art was not contrary to Art. 84 EPC.

In **T 391/91** claim 1 set out in general terms the sequence of steps to be followed in order to put the invention into practice, ie in order to produce unicellular micro-organism host cells having INA (ice nucleation activity) or enhanced INA. The claim was in fact a generalisation from the particular examples. The department of first instance considered the definition in general functional terms of the DNA fragment encoding an expression product responsible for the INA+ phenotype inadmissible. The board stated that as there was no reason to doubt that it was possible to generalise the specific teaching of the examples given, it would be unfair to the appellant to require a restriction of the claim by incorporation therein of the specific features of the examples. The skilled person could use any suitable variant capable of providing the same effect of the invention. This might be tedious, but it was nothing out of the ordinary in this field and involved only routine trials.

In **T 241/95** (OJ 2001, 103) the Swiss-type second medical use claim defined the disease or disorder to be treated with substance X as "condition which is capable of being improved or prevented by selective occupation of the serotonin receptor". The board held that this functional definition was unclear because no test was at hand to determine whether the therapeutic effects were a result of the newly discovered property of X of occupying the serotonin receptor or any other known or unknown property of that substance.

(b) Unspecified features

Unspecified features are permitted as follows:

(aa) To avoid an undue limitation of the scope of the claim where the person skilled in the art can verify the result by tests involving nothing more than trial and error (**T 88/87**).

(bb) To render the meaning of the feature intelligible from the actual claim.

Thus, the objection in case **T 487/89** was based on the fact that the claim had indicated both tenacity and toughness with a lower but no upper limit. The opposition division took the view that such "open-ended" parameters were always objectionable if they related to an inherently desirable characteristic. The board, however, held that whether the absence of an upper or lower limit was acceptable in a claim in any individual case depended on all the surrounding circumstances. Where, as in the case in question, the claim sought to embrace values as high as could be attained above a specified minimum level, given the other parameters of the

claim, then such open-ended parameters could not normally be objected to. This decision was confirmed by **T 129/88** (OJ 1993, 598), **T 87/84**, **T 92/84** and **T 136/84**.

In **T 227/91** (OJ 1994, 491) the claims comprised a coating thickness defined by a formula with two parameters (a) and (t). Parameter (a) represented the thermal diffusivity of the coating means and was therefore a feature inherent in the instrument. Parameter (t) represented the effective pulse time of the laser and was related to the laser operating conditions, not to the structure of either the laser or the instrument. The thickness defined in the claims was still connected with the mode of operation of the laser, that is, with a human factor irrelevant to the instrument per se. The extent of the protection conferred by the subject-matter of the claims was therefore regarded by the board as ambiguous and indefinite.

In **T 455/92** independent claim 2 was worded as follows: "Covering ... for a pressing ..., characterised by:

(a) a length which corresponds at least to the circumference of the shell face of the pressing to be covered,

(b) an overall breadth sufficient to cover the shell face and both end faces of the pressing, and

(c) a fold such that ... the breadth ... corresponds to the breadth of the shell face of the pressing ...".

The board did not see this as a breach of Art. 84 EPC, since reference had been made to a physical entity which was known; hence the range of sizes was definable in so far as it excluded packaging materials for other physical entities. Furthermore, it was self-evident to a skilled person in this field that the size of the packaging material (the covering) was dependent on the physical entity to be packed (for the interpretation of claims see p. 168).

2. Conciseness

In **T 79/91** the board stated that lack of clarity of the claims as a whole could arise from lack of conciseness. The invention in this case had been set out in at least ten independent claims of different scope. The board was of the opinion that this presentation made it difficult, if not impossible, to determine the matter for which protection was sought, and placed an undue burden on others seeking to establish the extent of the monopoly. Citing this case, the board found in **T 596/97** that, prima facie, a total of seven independent claims could be undesirable for reasons of conciseness and clarity. However, on the facts of the specific case before it, the board found the independent claims to be acceptable.

In **T 246/91** the application comprised 191 claims, reduced in appeal proceedings to 157. The board ruled that the number of claims had to be reasonable, bearing in mind the nature of the invention claimed. Although no hard and fast definition could be accorded to the term reasonable, this did not mean that the requirement was wholly devoid of meaning and legal effect. In deciding the matter, regard had to be had to the interest of the relevant public, since

patents ought not to be allowed to erect a legal maze or smoke screen in front of potential users of the inventions to which they laid claim. Patent claims taken singly as well as in totality had to be clear and concise in order to enable such potential users to ascertain, without undue burden, let alone recourse to litigation, whether their planned commercial use was likely to infringe the patent. Having to construe the remaining 157 claims and form a valid and commercially useful opinion on whether or not any one of them could prevent or hinder the commercial activities imposed, necessarily, a severe and totally undue burden on the public. It followed that the application in question contravened the clear provisions not only of R. 29 EPC but also of Art. 84 EPC.

However, where a single main claim having to present a multiplicity of alternatives corresponding to the plurality of processes claimed would have lacked clarity, multiple claims could be concise within the meaning of Art. 84 EPC (**T 350/93**). Overlapping method and use claims were allowed by the board in **T 433/99**, as the emphasis and thus scope of the claims was slightly different. Moreover, such a method allowed for differences in claim interpretation in the different contracting states of the EPC, particularly during infringement and revocation proceedings in national courts, where opportunities for amendment were limited. The Guidelines for Examination at the EPO, C-III, 3.2 also discouraged an over-academic or rigid approach to the presence of claims that were differently worded but apparently of similar effect.

3. Claims supported by the description

Art. 84 EPC stipulates that the claims must be supported by the description. This requirement means that the subject-matter of the claim must be taken from the description and it is not admissible to claim something which is not described.

In decision **T 133/85** (OJ 1988, 441) the board took the view that a claim which did not include a feature described in the application (on the proper interpretation of the description) as an essential feature of the invention, and which was therefore inconsistent with the description, was not supported by the description for the purpose of Art. 84 EPC. See also **T 409/91** (OJ 1994, 653) above (p. 158).

In case **T 332/94** the board, confirming **T 409/91** (OJ 1994, 653), stated that the claims, in order to fulfil the requirement of Art. 84 EPC, had not only to contain all the features indicated as essential in the description, but had also to reflect the effective contribution to the art by enabling a skilled person, after reading the description of the application as filed, to carry out their teaching throughout the field to which they applied.

In **T 939/92** the board held that it did not follow from Art. 84 EPC that a claim was objectionable just because it was "unreasonably broad". The expression "supported by the description" meant that the technical features stated in the description as being essential features of the invention described must be the same as those used to define the invention in the claims, for otherwise the claims would not be true definitions but mere descriptions. The facts of the case in question differed from those underlying **T 409/91** and so an objection of lack of support could not be validly raised. In **T 586/97**, the board found that the absence from any independent claim of any upper limit on the amount of a particular detrimental but

II.B.3. Claims supported by the description

necessary component in the chemical composition claimed was at variance with the aim of the invention as set out in the description, namely, to decrease the percentage of the undesirable ingredient in the claimed composition. The claim was thus so broad it went beyond the scope of the invention as disclosed in the description.

In **T 659/93** the board confirmed that the requirement that the claims should be supported by the description meant that they had not only to contain all the features presented as essential in the description, but had also to reflect the applicants' effective contribution by enabling the skilled person to carry out their teaching throughout the field to which they applied.

In ex parte proceedings **T 484/92**, the board concluded that, in contrast to **T 409/91**, the requirement of support by the description had been met and the appellant was entitled to claim the alleged invention in broad functional terms, ie in terms of the desired end effect, because, having disclosed one mechanism for achieving that goal, there were alternative ways of performing the invention at the disposal of the person skilled in the art, which would become apparent to him upon reading the description, based on his common general knowledge (for the problem of the relationship between Art. 83 EPC and Art. 84 EPC see p. 154 et seq. above).

In **T 1055/92** the board stated that since the primary function of a claim was to set out the scope of protection sought for an invention this implied that it was not always necessary for a claim to identify technical features or steps in detail. This primary function of the claims should be clearly distinguished from the requirement that the European patent application had to disclose the invention in such a way that it enabled a person skilled in the art to carry out that same invention. The board considered that it was sufficient if the application as a whole described the necessary characteristics of an invention in a degree of detail such that a person skilled in the art could perform the invention. This requirement, however, related to Art. 83 EPC and was not relevant to Art. 84 EPC. Under Art. 83 EPC sufficient disclosure was required of a European patent application but not of an individual claim as such. A claim had to comprise the essential features of the invention; the essential features should in particular comprise those features which distinguished the invention from the closest prior art (see also **T 61/94**).

In **T 156/91** the alleged absence of essential features in the claim was not viewed as a question of reproducibility of the invention within the meaning of Art. 83 EPC and Art. 100(b) EPC, for which the disclosure as a whole is always the criterion; instead, what was involved was an objection under Art. 84 EPC.

In decision **T 435/89** an allegedly essential process feature was missing from the apparatus claim. The board held that a claim for an apparatus per se need not contain information about the most efficient way of operating it, ie process features. The apparatus and the process for its use were to be kept strictly separate.

Similarly, in **T 888/90** (OJ 1994, 162), the appellants had removed from their claim 1 a feature deemed to be necessary to the solution of the technical problem. The board stressed that the omission of a feature in a combination could mean that a claim related merely to a sub-combination of an invention. Such a sub-combination with no function other than that of an

intermediary building block for providing an inventive full combination might also be patentable in principle, if expressly presented as such in the application as filed and if it otherwise satisfied all conditions for patentability. Such sub-combinations were analogous to intermediate compounds in a chemical synthesis. However, in the board's view, it could not be assumed that assemblies from the outset directly and unequivocally implied their own sub-combinations. Thus, without express disclosure in this respect, including the particular use, the support for such claims would be inadequate.

In **T 977/94** the board decided that if the patentee amended his claims he had also to bring the description into line with them, because of its fundamental importance. An invention was only claimable to the extent that it was supported by the description (Art. 84 EPC, second sentence), and the claims were interpreted in the light of the description (Art. 69 EPC). So it was necessary to check that the essential elements of the invention claimed were also described as such in the description.

4. Interpretation of claims

4.1 General

The skilled person, when considering a claim, should rule out interpretations which are illogical or which do not make technical sense. He should try, with synthetical propensity, ie building up rather than tearing down, to arrive at an interpretation of the claim which is technically sensible and takes into account the whole disclosure of the patent (Art. 69 EPC). The patent must be construed by a mind willing to understand, not a mind desirous of misunderstanding (**T 190/99**).

4.2 Meaning of terms

In cases **T 759/91** and **T 522/91** the claims contained the expression "comprising substantially". The board was of the opinion that this term lacked clear, explicit boundaries and its scope needed interpretation. While in everyday language the word "comprise" might have both the meaning "include" or "comprehend" and "consist of", in drafting patent claims legal certainty normally required it to be interpreted by the broader meaning "include" or "comprehend". The word "substantially" imposed a restriction on the word "comprising" in the sense that "to a large extent only that is comprised which is specified". The boundaries of the term "comprising substantially" were therefore to be drawn where the essential characteristics of the specified subject-matter ceased. The scope of the term "comprising substantially" was therefore interpreted as being identical to that of "consisting essentially of". However, in view of the unequivocal character of the words "consisting of" as compared to "comprising", the expression "consisting essentially of" was to be given preference.

In decision **T 711/90** the board confirmed the assumption in the case law that the substitution of the term "consists of" for "contains" in a claim raised the question of clarity of the claim. When, as in the claim in question, the glass consisted of components denoted i, ii and iii, the presence of any additional component was excluded and, therefore, the proportions of the components i, ii and iii expressed in percentages should have added up to 100 mole % for each claimed composition.

In **T 762/90** a lack of clarity was found in the use of a trade mark designating a whole series of products which differed from one another depending on phases in their industrial development. Moreover, the board expressed doubts about the use of such a designation, since it was uncertain whether the meaning of the trade mark would remain unaltered up to the end of the patent term (see also **T 939/92** on p. 166)

In **T 1045/92** the claims concerned "a two-pack type curable composition comprising ...". In the board's view "a two-pack curable composition" was an item of commerce as familiar to readers skilled in the polymer art as everyday articles were to the public at large. The claim was therefore clear.

In **T 409/97** the board held that an erroneous statement in the introduction to the description was of no assistance in interpreting the claim and establishing the subject-matter for which protection was being sought, where this statement contradicted its actual content.

4.3 Relevance of Art. 69 EPC

The subject-matter of claims is governed by Art. 84 EPC and their function by Art. 69 EPC. According to Art. 84 EPC the claims define the invention for which protection is sought. Under Art. 69 EPC the claims determine the extent of the protection which will be conferred by the patent, through their definition of the invention. Under Art. 69 EPC the description and drawings are used to interpret the claims. The question arises whether it is possible to interpret the claims in the light of the description and drawings as provided in Art. 69 EPC merely in order to determine the extent of protection or whether it is also possible to do so in order to establish whether the conditions governing patentability and clarity have been satisfied.

In a number of decisions, such as **T 23/86** (OJ 1987, 316), **T 16/87** (OJ 1992, 212), **T 62/88**, **T 89/89**, **T 121/89**, **T 476/89**, **T 544/89**, **T 565/89** and **T 952/90**, the boards of appeal laid down the principle whereby the description and drawings are used to interpret the claims when an objective assessment of the content of a claim has to be made to judge whether its subject-matter is novel and not obvious. In decision **T 50/90** the board pointed out that the description and drawings are used to interpret relevant terms contained in the claims when the extent of protection has to be determined. In **T 238/88** the board stated that the fact that the features were not in fact usual terms of art does not rule out clarity and conciseness, since according to Art. 69 EPC the description should be used to interpret the claims.

In a large number of decisions (eg **T 23/84**, **T 327/87**, **T 238/88** (OJ 1992, 709), **T 416/88**, **T 194/89**, **T 264/89**, **T 430/89**, **T 472/89** and **T 606/91**), the boards interpreted the claims in the light of the description and drawings in order to establish whether they were clear and concise within the meaning of Art. 84 EPC and to determine the subject-matter of the patent.

In **T 1129/97** (OJ 2001, 273), the board held that the mere fact that the precise meaning of an unclear term ("low alkyl") was expressly disclosed in the description but not in the claims did not mean that the latter met the clarity requirement. The clarity stipulation under Art. 84 EPC concerned only the claims, and therefore - according to the established case law of the EPO boards of appeal - required that they be clear in themselves, without there being any

Claims

need for the skilled person to refer to the description. True, under Art. 69(1) EPC the description was to be used to interpret the claims. But Art. 69 EPC concerned only the extent of protection where this was at issue, eg with third parties, and not (as in Art. 84 EPC) the definition of the matter to be protected by a claim.

In **T 456/91** the board was of the opinion that the clarity of a claim was not diminished by the mere breadth of a term of art contained in it, if the meaning of such term was unambiguous for a person skilled in the art, either per se or in the light of the description. In this case an extremely large number of compounds could be used for carrying out the invention. It was clear from the claims, when read in the light of the description, which peptides were suitable for the invention.

In **T 2/80** (OJ 1981, 431), the board pointed out that a claim did not comply with the requirement of clarity laid down in Art. 84 EPC if it was not, per se, free of contradiction. It had to be possible to understand the claims without reference to the description.

In decision **T 454/89** the board shared this view and explained that Art. 84 EPC requires that claims must be clear in themselves when read using normal skills, including knowledge of the prior art but not any knowledge derived from the description contained in the patent application or the amended patent. While it was true that Art. 69 EPC allowed the description to be used to interpret the claims, it was only concerned with the extent of protection conferred as one of the effects of an application or patent whenever that extent had to be determined, particularly for third parties. It was not concerned with a claim's definition of the matter for which protection was sought, as was Art. 84 EPC. In the course of the examination of an opposition, therefore, the applicant or patentee could not rely on Art. 69 EPC as a substitute for an amendment which would be necessary to remedy a lack of clarity. The board took the same line in decision **T 760/90**.

In **T 728/98** (OJ 2001, 319) the board held that it followed from the requirement of legal certainty that a claim could not be considered clear within the meaning of Art. 84 EPC if it comprised an unclear technical feature (here "substantially pure") for which no unequivocal generally accepted meaning existed in the relevant art. This applied all the more if the unclear feature was essential for delimiting the subject-matter claimed from the prior art. In this case the description did not give any indication as to how the term should be interpreted. See also **T 752/94**.

However, in **T 416/87** (OJ 1990, 415) the board was confronted with the situation where a feature was not included in the claims which the description on its proper interpretation specified to be an overriding requirement of the invention. The board held that, following Art. 69(1) EPC and its Protocol, the claims might be interpreted as requiring this as an essential feature, even though the wording of the claims when read in isolation did not specifically require such feature.

Likewise, in **T 860/93** (OJ 1995, 47) the board assumed that the description might be used to determine whether the claims were clear. It accepted the reasoning in **T 454/89**, namely that the description could only be used to determine the extent of the protection conferred and not to establish clarity, only in the case of claims which were self-contradictory, but not

in general. See also **T 287/97**.

In **T 442/91** the respondents wanted the board to rule on the extent of the protection conferred by what they considered to be broad claims. The board, however, felt that it should not concern itself in opposition appeal proceedings with the extent of the protection conferred by a patent (except for the purposes of Art. 123(3) EPC), as this was the responsibility of the national courts dealing with infringement cases. Whilst the EPO made it clear how terms of art used in the claims should be understood, it should not proffer any further interpretation of the patent's future scope beyond that. See also **T 740/96**.

In line with this thinking, the board in **T 439/92** and **T 62/92** interpreted the claims with a view to identifying their subject-matter.

When the technical content of the claims and the description clearly establish how an invention operates, these features cannot be disregarded for the purposes of assessing patentability by interpreting them merely as defining an intended use (**T 458/96**).

5. Form of the claims

R. 29(1) EPC provides that claims must contain, wherever appropriate, a statement indicating the designation of the subject-matter of the invention and those technical features which are necessary for the definition of the claimed subject-matter but which, in combination, are part of the prior art, and a characterising portion stating the technical features which, in combination with the features stated in the first part, it is desired to protect.

Which features are known and hence to be included in the preamble has to be decided in the light of the objective facts (**T 6/81**, OJ 1982, 183).

In decision **T 13/84** (OJ 1986, 253), the board ruled that a claim in two-part form had to be regarded as appropriate if a clearly defined state of the art existed from which the claimed subject-matter distinguished itself by further technical features. It could not be accepted as a general rule that the piece of prior art used for the preamble of the claim should be concerned with the same problem as the invention. Generally, the apparatus or process constituting the prior art which was nearest to the invention would have to figure in the preamble of the claim, stating such features of it as were necessary for the definition of the claimed subject-matter and which were in combination already part of this prior art. R. 29 EPC made no reference to the necessity or desirability that the characterising portion of the claim should fairly set out the inventive step. It was the subject-matter of the claim as a whole which embodied the invention and the inventive step involved. This decision was confirmed by **T 162/82** (OJ 1987, 533), where the board added that the extent to which prior art was cited in the description could not be a determining factor in deciding whether the one-part or the two-part form of a claim was appropriate in a given case. Likewise, in **T 850/90**, it was confirmed that examination for inventive step should also take account of the features in the preamble, since the invention was defined by the claims as a whole. In **T 980/95** it was held that there was no explicit requirement in R. 29(1)(a) EPC that a claim in two-part form be set up on the basis of the "closest" prior art, since the rule made no reference to the necessity or desirability for the characterising portion of the claim to set out the inventive step. Thus the mere fact that

a particular state of the art turned out, in later proceedings, not to be the "closest" state of the art for the assessment of inventive step did not in itself result in a two-part form based on that art contravening R. 29(1)(a) EPC.

In **T 170/84** (OJ 1986, 400) it was pointed out that where a two-part claim would lead to a complex formulation it was no longer appropriate. In a one-part claim, the features required for the definition which belonged to the state of the art had to be sufficiently clear from the description. This principle has been upheld inter alia in **T 269/84**, **T 120/86**, **T 137/86** and **T 278/86**. The latter two decisions stipulated that a two-part claim was not justified if it gave an incorrect picture of the state of the art. In **T 735/89** the board did not accept a one-part claim because it gave the impression that there was no closer state of the art.

In **T 99/85** (OJ 1987, 413) the board held that in opposition proceedings there was no reason officially to insist on a change in the wording of the claim simply because one feature in the preamble to a two-part claim did not belong to the state of the art. Furthermore, the board saw R. 29(1) EPC as an implementing regulation which did not constitute a ground for opposition (a similar view was held in **T 168/85**, **T 4/87** and **T 429/88**).

In decision **T 688/91** (see above) the board took the view that there was a breach of R. 29 EPC and Art. 84 EPC where an incorrect distinction was made between the preamble and the characterising portion.

In **T 350/93** the patent application disclosed processes for the production of electro-active material and composite materials containing such material. It included main claims 1 to 4 and 6 to 8 in one-part form. The board observed that the one-part form was justified because details in certain process steps distinguished the claimed processes from those known from the prior art and the resulting distinctive features were difficult to pick out in a simple and unambiguous form.

6. Product-by-process claims

6.1 Introduction

Under Art. 64(2) EPC the protection conferred by a process patent extends to the products obtained directly by the process, even if they are not patentable per se. Certain applicants tried to acquire protection for known products by using process claims to define them and arguing thus - it follows from Art. 64(2) EPC, which expressly states that protection will be granted for the direct product of a patentable process, that, under the EPC, a product is rendered novel by the fact that it is produced by means of a new process. This is notwithstanding the fact that such product is not new per se, by virtue of its physical characteristics (see **T 248/85** (OJ 1986, 261), similarly **T 150/82** (OJ 1984, 309)).

The boards of appeal did not accept this line of argument and made a distinction between claims to a new and inventive product defined by its method of manufacture and claims to a new and inventive process, the protective effects of which also extended to the direct products of this process.

The first decision in this regard was **T 150/82** (OJ 1984, 309). The board stated that claims for products defined in terms of processes for their preparation (known as "product-by-process" claims) were admissible only if the products themselves fulfilled the requirements for patentability and there was no other information available in the application which could have enabled the applicant to define the product satisfactorily by reference to its composition, structure or some other testable parameter.

The boards of appeal have further clarified and developed these requirements in their case law.

6.2 Requirement that the claimed product must be patentable

In decision **T 248/85** (OJ 1986, 261) it was stated that a product could be defined by the use of various parameters, such as its structure or its process of preparation. The use of a different parameter by which to define a particular product could not by itself give the product novelty. Furthermore Art. 64(2) EPC did not confer novelty upon a claim which was formulated as a "product-by-process" when no novelty existed in such product per se, and did not entitle or enable an applicant for a European patent to include such claims in his patent which did not satisfy the requirements for patentability of Art. 52(1) EPC.

In **T 219/83** (OJ 1986, 211) the board stated that "product-by-process" claims had to be interpreted in an absolute sense, ie independently of the process. If their subject-matter as such was new, they still did not involve an inventive step merely because the process for their preparation did so. In order to be patentable, the claimed product as such had to be a solution to a separate technical problem which was not obvious in the light of the state of the art.

These criteria were confirmed by many decisions (see **T 251/85**, **T 434/87**, **T 171/88**, **T 563/89**, **T 493/90**), including **T 664/90**, where the board stated that "once the product itself is part of the state of the art and is thus not novel according to the criterion of novelty as set out in Art. 54(1) EPC, the fact of defining this product by reference to a new process is irrelevant to the question of novelty. The use of a different parameter for defining a known product does not confer novelty on the product".

The board clarified the conditions for novelty of product-by-process claims in decision **T 205/83** (OJ 1985, 363). It stated that the polymer product of a known chemical process was not rendered new merely by virtue of a modification to the process. If a chemical product could not be defined by structural characteristics but only by its method of manufacture, novelty could be established only if evidence was provided that modification of the process parameters resulted in other products. It was sufficient for this purpose if it was shown that distinct differences existed in the properties of the products. This evidence might not include properties which could not be due to the product's substance parameters (see also **T 279/84** and **T 151/95**).

In decision **T 300/89** (OJ 1991, 480) it was stated that the application lacked novelty if the claim neither defined the product structurally nor mentioned all the specific conditions needed to obtain necessarily the products whose novelty could be demonstrated, eg by means of

comparative tests.

6.3 Requirement that the claimed product cannot be described in any other way

The criterion that it must be impossible to define the claimed product other than in terms of a process of manufacture was discussed specifically in the following decisions.

The board stated in decision **T 320/87** (OJ 1990, 71) that product-by-process claims were admissible for hybrid seeds and plants when they were not individually definable biological entities which could be characterised by their physiological or morphological features.

In decision **T 130/90** the board had to rule on recombinant monoclonal antibodies having two different specificities and produced by a process involving trioma cells formed by somatic cell fusion of a hybridoma cell and a lymphocyte or quadroma cells formed by somatic cell fusion of two hybridoma cells. The patentability of the process was not questioned; at issue was the validity of the product claim. The prior art did not disclose how fully re-associated molecules, ie with the same structure as native antibodies, which might be contained in the mixture of hybrids, could be screened out and isolated from molecules which might be bispecific but otherwise artificial because misfolding, mispairing or deamination might have occurred during the harsh chemical treatment of the starting materials. The board allowed a claim for bispecific recombinant monoclonal antibodies comprising intact immunological chains produced by the process claimed in the independent process claims of the patent in suit. Defining the antibodies by their process was the only way of delimiting them vis-à-vis the prior art. The board emphasised that the established case law of the boards of appeal, which states that a product is not rendered novel merely by the fact of being produced by means of a new process, was not called into question.

The board held in **T 487/89** that, although in general product-by-process claims were to be avoided, there might be circumstances where, although the product might be capable of being defined in terms of specific parameters, there were no such parameters available to the patentee for introduction into the claim, whereas process features taken from a sub-claim might overcome an objection of lack of novelty or lack of inventiveness.

In **T 552/91** (OJ 1995, 100) it was held that where a European patent application relates to chemical substances originally defined by an incorrect chemical structural formula, correction of which is not allowable under R. 88 EPC, replacement of the incorrect formula by the correct one infringes Art. 123(2) EPC (see p. 207). Nevertheless, the submission of a "product-by-process" claim is compatible with Art. 123(2) EPC if it contains all the measures required to obtain this result (starting materials, reaction conditions, separation).

6.4 Combination of product and process features

In decision **T 148/87** the board stated that it was admissible to combine product parameters and process parameters in the same claim. In **T 129/88** (OJ 1993, 598) the board was of the opinion that the inclusion in a product claim of one or more process features might be permissible if their presence was desirable having regard to the impact of the national laws of one or more contracting states.

6.5 Extension of protection conferred by product-by-process claims

In decision **T 411/89** the board had to decide whether the amendment of a product-by-process claim from "obtained" to "obtainable" extended the protection conferred by the patent. The board took the view that the protection was not extended because the amendment did not modify the definition of the product which was claimed per se from the beginning and because the process used for its characterisation remained the same.

In decision **T 423/89**, by restricting the claim to only one of a number of manufacturing processes specified in the original claim and disclosed in the description, the patent proprietors had ceased to claim absolute product protection and had undertaken a significant limitation of their claim. There were therefore no objections under Art. 123(3) EPC. The change in category from a product-by-process claim to a manufacturing process claim was also admissible in this case, as the protection afforded by the granted patent had to extend to all those methods of manufacture covered by the processes described in the claim and disclosed in the patent specification.

In **T 20/94**, however, objections under Art. 123(3) EPC led to the board's refusing a change from process claims to a product-by-process claim by way of amendment, as despite the fact that a product-by-process claim was characterized by the process for its preparation, it nevertheless belonged to the category of claim directed to a physical entity and was a claim directed to the product per se. The scope of protection conferred by a product claim exceeded the scope conferred by a process claim under Art. 64(2) EPC.

7. Claims fees

R. 31(1) EPC lays down that any European patent application comprising more than ten claims at the time of filing must, in respect of each claim over and above that number, incur payment of a claims fee.

The Legal Board of Appeal ruled in case **J 9/84** (OJ 1985, 233) that R. 31(1) EPC is to be interpreted as meaning that claims numbered 1 to 10 upon filing of the European patent application - or transmittal to the EPO of the international application under the PCT - were exempt from fees, and that claims numbered 11 onwards were not. Accordingly, abandoning a fee-exempt claim after filing - or transmittal - did not have the effect that its fee exemption was transferred to another claim.

The question has arisen on a number of occasions as to whether part of, or an annex to, the description of a European patent application comprising a series of numbered paragraphs drawn up in the form of claims should be regarded as claims for the purposes of R. 31(1) EPC.

In **J 5/87** (OJ 1987, 295) the application contained, under the heading "Claims", ten claims; however it contained 33 further claims which were annexed to the description as preferred, numbered embodiments presented in the form of claims. The addendum appeared in form as well as in substance only to consist of claims within the meaning of Art. 84 EPC and R. 29

EPC. Furthermore, the appellant had admitted that the addendum had been included in the application in order to maintain the possibility of making its content a basis for substantive examination. As a result, the applicant was required to pay a claims fee - applicants are not at liberty to ignore the provisions on the form and content of the description and claims contained in R. 27 EPC and R. 29 EPC.

In decision **J 15/88** (OJ 1990, 445), the board decided in a similar case that although the 117 disputed "clauses" in question were numbered and arranged as claims and seemed to define matter in terms of technical features, they were not to be regarded as such since the fact remained that they were never referred to as claims and there were claims elsewhere which were referred to as such.

Decisions **J 16/88**, **J 29/88**, **J 25/89**, **J 26/89**, **J 27/89**, **J 28/89**, **J 34/89** and **T 490/90** all confirmed this opinion, pointing out that the case dealt with in **J 5/87** differed from the others since the applicant had indicated an intention to regard the annexes as claims. The intention of the appellant not to have this part considered as claims is more important than the form of the text.

C. Unity of invention

1. Introduction

Under Art. 82 EPC, the European patent application may relate to one invention only or to a group of inventions so linked as to form a **single general inventive concept**. R. 30 EPC gives an interpretation of the concept of unity of invention where a group of inventions is claimed. This rule was amended by decision of the Administrative Council of the European Patent Organisation dated 7.12.90 (OJ 1991, 4), which entered into force on 1.6.91, but the principles set out by board of appeal case law can still be applied. The amended text of R. 30 EPC includes the minimum guarantees set out in the previous text of the rule (see Notice from the EPO dated 3.6.91, OJ 1991, 300).

The boards of appeal are responsible for judging unity of invention when they decide on a protest made by an applicant against an additional fee charged by the EPO as ISA or IPEA (see Art. 154(3) EPC, 155(3) EPC). Harmonisation of the definitions regarding the requirement of unity of invention in the PCT (R. 13 PCT, amended like R. 30 EPC) and the EPC (Art. 82 EPC together with R. 30 EPC) means that the criterion of unity of invention in both systems will be subject to uniform assessment by search examiners and boards of appeal alike. The principles involved in unity of invention will therefore be dealt with as one.

2. Plurality of independent claims

2.1 General issues

Under Art. 82 EPC and new R. 13.1 PCT, the international application must relate to one invention only or a group of inventions so linked as to form a single general inventive concept. The second of these alternatives, ie, the single-concept linked group, may give rise to a

plurality of independent claims in the **same or different categories**.

In **W 5/92** the board considered it to be implicit in the definition of R. 13.1 PCT that the "invention" be considered in the broadest sense. Thus, according to Chapter VII, 5 of the PCT Search Guidelines (PCT Gazette No. 30/1992, Sec. IV; No. 29/1993, Sec. IV), the mere fact that an international application contained claims of different categories or several independent claims of the same category was in itself no reason for objection on the grounds of lack of unity of the invention.

2.2 Independent claims in different categories

R. 30(1) EPC and R. 13.2 PCT state that where a group of inventions is claimed in one and the same European patent application, the requirement of unity of invention referred to in Art. 82 EPC is fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features.

The previous R. 30 EPC (old version in force until 31.5.91), like the previous R. 13 PCT, specified three cases in which a combination of independent claims in **different** categories was to be considered as having unity in the above-mentioned sense. The combinations were as follows:

- (a) a product, a process adapted for the manufacture of the product and a use of the product;
- (b) a process and an apparatus for carrying out the process;
- (c) a product, a process for its manufacture and an apparatus for carrying out the process.

The list was not exhaustive and other combinations were permitted if they had met the requirements of Art. 82 EPC (**T 861/92**). The same applied to the old version of R. 13.2 PCT (**W 3/88** (OJ 1990, 126), **W 28/88**, **W 3/89**). In **T 702/93** it was held that this old version of R. 30 EPC did not provide for such a fictitious unity in case of independent claims in the **same** category.

The principles laid down in previous board rulings on unity of invention were based on this fiction, which no longer exists now that R. 30 EPC and R. 13 PCT have been amended. However, as decision **W 13/89** expressly stressed, the principles set out in this case law remain unchanged (see also **T 169/96**).

In **T 202/83** it was concluded from the old version of R. 30(c) EPC that the requirement of unity was not met by every subject-matter for carrying out a process. On the contrary, the provision presupposed that the means for carrying out the process had been specifically designed. Consequently, such a means in connection with the corresponding process did not meet the unity requirement if it was obvious that it could also serve to solve other technical problems.

In **T 200/86** the board held that it was possible to claim, in one application, not only a product for pharmaceutical use, but also the product's non-therapeutic (cosmetic and dietary) uses.

In **W 29/88** the international application related to chemical products, a process for their

Unity of invention

preparation and their use. The board was of the opinion that a particular use of a class of compounds on the one hand, and, on the other hand, a claim to that class of compounds per se or to certain members of that class of compounds could form a single general inventive concept. The board stressed that the salient point was not the identity of the respective structural scopes, but the question whether the compounds claimed per se (and the process for their manufacture) contributed to the solution of the problem underlying the use invention.

In **W 32/88** (OJ 1990, 138) the board was of the opinion that an invitation to pay an additional fee on the grounds that an international application concerning a process and an apparatus related to two different inventions, whereas the **apparatus was specifically designed for carrying out the process**, had no legal basis, even if the claims for the apparatus were not restricted to such use (see also **W 16/89**).

In **W 13/89** the board found unity of invention between a claim to the use of a substance or composition for the preparation of a medicine intended for a specific use (second medical use) and a claim to a pharmaceutical product containing that substance or composition (first medical use). This decision was confirmed in **W 5/91** and **W 28/91**.

In **W 23/91** the board confirmed the ISA's view that the novelty of a given product might justify claims of different categories being contained in a single application without contravening the requirements of unity of the invention (several new uses of the product in different areas and/or new processes concerning the product, eg preparation). In the case in point, the two independent product claims related to two "products", namely a nucleic acid sequence and the protein relating to the nucleic acid sequence. The board held that these products might constitute the common link if they were novel.

In **W 40/92** the board took the view that there can be unity of invention if one independent claim to a process and another to the means for executing that process were comprised in one application and if the said means was itself also a process.

In **T 492/91**, the board found that, for the purposes of Art. 82 EPC, the whole composition covered by claim 6 (new composition) need not be the product of the process according to claim 1 (process for preparing known products). It was sufficient for one component of the composition to be such a product where the composition and the process were intended to solve the same technical problem. The board concluded that the scope of claim 6 therefore did not have to be limited to the compositions resulting from the process according to claim 1, thus excluding the compositions obtainable by subsequent mixing.

3. Dependent claims

R. 13.4 PCT expressly provides that dependent claims must fulfil the requirement of unity in accordance with R. 13.1 PCT. The EPC makes no comparable express provision. The question has therefore arisen as to whether dependent claims have to be treated differently under the two provisions. Board of appeal case law on PCT cases has been uniform: the boards have repeatedly confirmed the principle that the requirement of unity must also be met by dependent claims (see inter alia **W 3/87**, **W 2/88**, **W 30/89**, **W 32/89**, **W 26/90**, **W 8/91** and **W 54/91**). In EPC cases the boards likewise assume that dependent claims have to meet the

requirement of unity. As distinct from the PCT procedure, under the EPC the approach is not as strict as in the case of independent claims, where the examination is always carried out in accordance with the express requirement, but only in those cases where unity could be problematical (see **T 140/83** and **T 249/89**).

In **W 8/91** it was decided that, where claims were formally dependent, the ISA had to **state expressly** why they lacked unity; it was not enough simply to say that this was shown directly by the subject-matter as defined by the ISA.

In **W 6/98** the board held that anticipation of the subject-matter of an independent claim might well lead to a situation of non-unity a posteriori, which however could only be established by showing that there was indeed no unifying novel inventive concept common to all dependent claims. The board noted that lack of novelty of the subject-matter of an independent claim did not automatically lead to a posteriori lack of unity for the claims directly or indirectly appended to said independent claim. This became immediately apparent when two specific cases were considered: if all the associated dependent claims only referred back to their respective preceding claim, then lack of novelty of the subject-matter of the corresponding independent claim could not cause a situation of non-unity on an a posteriori basis since in an assessment of unity the first novel dependent claim would replace the independent claim, the remaining claims being then dependent on said first novel dependent claim (see Annex B to the Administrative Instructions, Part 1(c)(i), published in PCT Gazette Section IV No. 24/1996, 9474). On the other hand, if each of the dependent claims directly referred back to a fully anticipated independent claim, then there might be lack of unity a posteriori, but only in case there was no inventive link between the remaining dependent claims, which issue had to be carefully considered (see Annex B to the Administrative Instructions, Part 1(c)(ii)). An analogous conclusion could be drawn from the passage of the above-mentioned PCT Guidelines cited in the IPEA's invitation: "If the common matter of the independent claims is well known and the remaining subject-matter of each claim differs from that of the others without there being any unifying novel inventive concept common to all, then clearly there is lack of unity of invention

4. Intermediate products

In **T 57/82** (OJ 1982, 306) it was stressed that the subject-matter of an application relating to new chemical end-products, processes for their preparation, and to new intermediates for those end-products at all events had unity within the meaning of Art. 82 EPC if all these subject-matters were technically interconnected and integrated into a single overall concept by being oriented towards the end-products. In this context, starting materials which were used in a process for preparing end-products and which were themselves products of a disclosed, albeit unclaimed, production process were also considered to be intermediates. This principle was confirmed in **T 110/82** (OJ 1983, 274) for low-molecular products. According to that board, an invention relating to new low-molecular end-products and to several groups of new low-molecular intermediates invariably had unity if the groups of intermediates prepared and oriented towards the end-products were technically closely interconnected with the end-products by the incorporation of an essential structural element into the end-products and if due account was taken of the regulatory function of Art. 82 EPC (prohibition of unjustified saving of fees, need for ready comprehensibility).

This was confirmed by **T 35/87** (OJ 1988, 134) and **T 470/91** (OJ 1993, 680). The intermediates in the latter case - unlike those in earlier ones - were not structurally related to each other. However, they provided both the essential structural elements present in the end-products. The intermediates of the application were therefore only made available with a view to obtaining the end-products and they were sufficiently closely technically interconnected with those end-products. Thus, they were integrated into a single overall inventive concept by being oriented towards the end-products. This was not prejudiced by the fact that the two sets of intermediates were not structurally related to each other since the orientation of the intermediates towards the end-products permitted the individual technical problems addressed by the intermediates to be combined into a unitary overall problem to the solution of which both sets of purpose-made intermediates contributed.

In **W 35/91** the board ruled that the requirements of unity of invention as set out in R. 13.1 PCT and R. 13.2 PCT were met if the novel intermediates designed to give rise to the novel end-products were technically sufficiently closely related by their contribution to an essential structural element of the end-products.

In **W 7/85** (OJ 1988, 211) the board stated that there was sufficient technical information to justify a prima facie finding of unity of invention between a claim to a **mixture** and a claim to one essential component of that mixture or a narrowly defined version thereof. If a finding of unity was justified in cases of chemical intermediates and end-products even when, as was often the case, only a part of the intermediate structure was actually incorporated, there was all the more reason to view the intact components and the corresponding compositions in a mixture as technically interconnected by incorporation. The former were not even destroyed when the admixture was prepared and fully retained their properties and functions in the product, unlike typical intermediates, which lost their identity in the process. Thus, both inventions could be considered to fall within the same general inventive concept. In such cases the requirement that the means for preparing the end-product should be "specially designed for carrying out the process" appeared to be fulfilled since none of the means led or was related to an end-product outside the scope of its definition. In view of this the character of the invention in the component was, prima facie, also dependent on the existence of an invention in the end-product.

5. Basis for lack of unity assessment

5.1 General issues

According to Art. 3(4)(iii) PCT, an international application must comply with "the prescribed requirement of unity of invention".

The determination of unity of invention must be made on the basis of the contents of the claims as interpreted in the light of the description and of the drawings, if applicable (Part 1(b) of Annex B of the Administrative Instructions under the PCT, which are binding not only on the ISA but also on the board of appeal acting as the "three-member board" according to R. 40.2(c) and (e) PCT (see decision **G 1/89** (OJ 1991, 155) and **W 6/97**).

In **W 39/90** the board observed that it was not the formal choice of words or form of reference,

but the actual content of the claims which established technical relationships between the subject-matter of different claims, and which was thus decisive for the question of unity. In **W 33/92** the board emphasised that R. 13.1 PCT did not require that the link between the subject-matter of the two independent claims be expressly stated in their wording. All that was required was that there be a single inventive concept.

Neither in the PCT itself, nor in the Rules under the PCT, were there any provisions specifying how to decide whether or not an international application complied with the prescribed requirement of unity of invention. However, in the PCT Search Guidelines, it was stated, *inter alia*, that lack of unity of invention might be directly evident "a priori", ie before considering the claims in relation to any prior art, or might only become apparent "a posteriori", ie after taking prior art into consideration (**G 1/89**, OJ 1991, 155).

5.2 Assessment of lack of unity by the International Search Authority

Lack of unity may be directly evident a priori, ie before the examination of the merits of the claims in comparison with the state of the art revealed by the search (**W 1/96** and **W 6/90**, OJ 1991, 438). If the objection of lack of unity of invention is raised a priori, the technical problem must be defined solely on the basis of the description and not of the prior art (see **W 50/91**, **W 22/92** and **W 52/92**).

For international applications the question arose as to whether the ISA had the power to assess unity of invention a posteriori, ie after an examination of the application. In **W 3/88** (OJ 1990, 126) the board had answered this question in the negative, interpreting the expression "a single general inventive concept" of R. 13.1 PCT as being simply the general concept of what the applicant subjectively claimed to be his invention. By contrast, in **W 44/88** (OJ 1990, 140) and **W 35/88**, the answer was in the affirmative. In the latter cases the boards had referred to the PCT Search Guidelines which permitted assessment of unity a posteriori. Both a board of appeal and the President of the EPO had then referred the question to the Enlarged Board of Appeal (**G 1/89** and **G 2/89**).

The Enlarged Board of Appeal delivered a decision in **G 1/89** (OJ 1991, 155) and **G 2/89** (OJ 1991, 166). It decided that the EPO in its capacity as an ISA might, pursuant to Art. 17(3)(a) PCT, request a further search fee where the international application was considered to lack unity of invention a posteriori. The Enlarged Board first noted that the problems involved were mainly due to the fact that, under the PCT, as well as under the EPC, search and (substantive) examination were carried out in sequentially different steps and by different examiners. This procedural separation of search and examination led inevitably to a certain overlapping, because of the functional relationship between search and examination. Thus, although the objective of the search was in principle limited to discovering and reporting on relevant prior art for the purpose of assessing novelty and inventive step, which was ultimately the task of the examining authority (ie the IPEA and/or the designated Office under the PCT and the examining division under the EPC respectively), it was obvious that in many instances the search examiner needed to form a provisional opinion on these issues in order to carry out an effective search. Otherwise, he would simply be at a loss how to judge the relevance of the documents in the prior art and how to arrange the search report accordingly. This overlapping was inherent in the PCT and the EPC and was in contrast to the system of

most national patent laws, where search and examination were carried out in one combined operation, normally by the same examiner, and where consequently there was no separation of fees for search and examination as under the PCT and the EPC. It further noted that the requirement of unity of invention under the PCT applied equally to the procedure before the ISA and to the procedure before the IPEA according to Art. 17(3)(a) PCT and Art. 34(3)(a) PCT, which was in conformity with the procedural separation of search and examination as referred to above and reflected the principle that the normal fees for search and examination were related to one invention (or a single general inventive concept) only. This led, in the view of the Enlarged Board, to the conclusion that the requirement of unity of invention under the PCT had in principle to be judged by the **same objective criteria** by both the ISA and the IPEA.

The Enlarged Board observed that the PCT Search Guidelines contained a direct reference to the consideration of unity of invention by the ISA on an a posteriori basis, ie after an assessment of the claims with regard to novelty and inventive step in relation to the prior art. A comparison with the corresponding EPO Guidelines, which was of particular interest in this context because of the similarity of the PCT and the EPC in respect of the separation of search and examination, showed that under the EPC it was also clearly foreseen that consideration of unity of invention by the search divisions might be carried out on an a posteriori basis (B-VII, 5; see R. 46 EPC). In the view of the Enlarged Board, this was a consequence of the special structure of the PCT and the EPC. Therefore, the guidelines had on this point to be considered as consistent with the PCT and the EPC. As to the PCT Search Guidelines, it was noted that such guidelines were based on Art. 56 PCT dealing with the task of the Committee for Technical Cooperation (see in particular Art. 56(3)(ii) PCT and the reference to the need for uniformity of, inter alia working methods). The PCT Search Guidelines, Chapter VII, 9 (PCT Gazette No. 30/1992, 14025), set out how this was to be applied in practice and were the basis for a uniform practice on the part of all International Searching Authorities.

In **W 21/89** the board found that since, under the terms of R. 33.1(a) PCT, the prior art consisted of everything that had been made available to the public before the date of filing of the international application, the ISA could use such documents as grounds for a decision of lack of unity a posteriori even if it was not possible to cite these documents against a corresponding national patent application in one of the contracting states designated.

5.3 Assessment of lack of unity in examination proceedings

According to the wording of Art. 82 EPC the requirement of unity of invention has to be satisfied not only by the patent application as filed but also by the patent application at later stages of the patent granting procedure, ie before the examining division, until grant of the patent. R. 46(2) EPC refers to the possibility that the examining division might disagree with the search division concerning lack of unity of a particular patent application and that then the examining division's opinion is decisive in that the latter may order refund of any further search fee at the applicant's request. It lies within the discretion given to the examining division to decide that a patent application lacks unity of invention within the meaning of Art. 82 EPC, even if the search division did not raise a similar objection under R. 46.1 EPC (**T 178/84** (OJ 1989, 157)).

In **T 87/88** (OJ 1993, 430) the board noted that the Enlarged Board of Appeal had ruled that when the EPO carries out an international search, an international application may also be considered, under Art. 17(3)(a) PCT, not to comply with the requirement of unity of invention "a posteriori", ie after prior art is taken into consideration and a provisional opinion on novelty and inventive step is thereby formed (**G 1/89** (OJ 1991, 155), **G 2/89** (OJ 1991, 166)). This principle applied equally when carrying out a European search (Art. 92 EPC) because in both cases the searches and search reports were virtually identical (see Guidelines B-III, 4.4). The appellants' objection that a search division was not entitled to decide that the claimed invention lacked unity "a posteriori" as well was therefore unfounded.

In **T 94/91** it was added that Art. 82 EPC clearly provided that European patent applications must satisfy the criteria of unity of invention without any restriction. There was no difference in the EPC between "a priori" and "a posteriori" lack of unity. Therefore, European patent applications had to fulfil the condition of unity and it was of no importance whether the non-unity appeared immediately or only in view of a document found during the search or during the examination.

In **T 544/88** (OJ 1990, 429) the board ruled that if an applicant, in response to an objection of lack of unity under Art. 82 EPC, filed new claims allegedly relating to an invention meeting the unity requirement, examination should be continued even if the other application documents had not been limited to the subject-matter of those claims. However, the examining division might request the applicant to bring the description and drawings into line with the valid claims (R. 27(1)(d) EPC) and to delete from the patent documents those parts of the description and drawings which did not refer to claimed inventions (R. 34(1)(c) EPC). It would then be necessary to check in each individual case whether such adjustments ought to be deferred until allowable claims were submitted.

In **J 24/96** (OJ 2001, 434) the appellant raised the issue of whether, in its decision, the examining division should have dealt with the alleged incompleteness of the partial search report. The board held that within the framework of R. 46 EPC it is the task of the examining divisions (and the boards of appeal) to examine whether communications of the Search Divisions under R. 46(1) EPC asking for further search fees were justified. R. 46(2) EPC does not, however, refer to any acts of the Search Divisions other than communications issued under R. 46(1) EPC. It was therefore not necessary for an examining division to deal in a **decision under Rule 46(2) EPC** with other objections raised by the applicants in connection with the search such as for example the objection that the partial search report was not drawn up in accordance with the Guidelines. To avoid any misunderstanding, the board observed that the examination divisions of course have the possibility of arranging for an additional search to be performed, if they consider a search report delivered by the Search Division incomplete. The board made clear that this had nothing to do with a formal decision issued under R. 46(2) EPC concerning refund of further search fees upon request.

5.4 Assessment of lack of unity in opposition proceedings

In **G 1/91** (OJ 1992, 253) the Enlarged Board held that unity of invention did not come under the requirements which a European patent and the invention to which it related had to meet under Art. 102(3) EPC when the patent was maintained in amended form. It was

consequently irrelevant in opposition proceedings that the European patent as granted or amended did not meet the requirement of unity. It was clear from the "travaux préparatoires" not only that lack of unity was deliberately excluded as a ground for opposition, but also that any lack of unity arising during opposition proceedings as a result of amendment of the patent had to be accepted.

The Enlarged Board noted inter alia that although unity of invention under Art. 82 EPC was a material requirement, it was still merely an administrative regulation. It served a number of administrative purposes, particularly in demarcating the respective responsibilities of the departments. The administrative purposes of unity were fulfilled in the main up to the time the patent was granted. The purpose and intention of opposition proceedings was to give a competitor the opportunity of opposing unjustified protective rights. Since this served the competitor's interests, he did not also need to be given the opportunity of contesting a patent on the ground of lack of unity. Lack of unity did not in fact rule out patent protection; it could only result in an application being divided to produce two or more patents.

6. Criteria for determining lack of unity

6.1 Determination of the technical problem underlying the invention

According to the established case law of the boards of appeal, determining unity of invention requires as a precondition an analysis of the technical problem or problems underlying the respective group of inventions (see **W 11/89** (OJ 1993, 225) and **W 6/97**). In **W 6/91** the board held that the determination of the technical problem underlying the invention was a mandatory precondition for the assessment of unity of invention, ie whether or not the subject-matter claimed as the solution to such a problem represented a single general inventive concept. The disregard of this principle would be in itself sufficient justification for the reimbursement of the additional search fees. In **W 8/94** the board held that a discussion of the problem underlying the claimed subject-matter was required, because only then was it possible to decide whether or not a common special technical feature within the meaning of R. 13.1 PCT and R. 13.2 PCT existed for different embodiments (see **W 11/89** (OJ 1993, 225), **W 14/89**, **W 59/90**, **W 14/91** and **W 17/91**).

In **W 6/97** the board found that establishing the technical problem underlying a claimed invention or group of inventions in relation to the state of the art should start, as a rule, from what was considered in the description as having been achieved by the claimed invention, since claims directed to compositions of matter at least were normally silent on the technical effects to be achieved by such compositions. As soon as the search revealed prior art which was clearly more relevant than that already acknowledged in the description of the international application, it was necessary to determine what was to be considered as the particular technical problem in view of both the disclosure of the international application as a whole and the prior art thus revealed (see **W 6/91**). Unity of invention might be assessed only after the technical problem had been determined in such a manner.

The boards have on several occasions stressed that an alleged **lack of clarity** in a claim cannot be used as a reason for an objection based on lack of unity (see **W 31/88** (OJ 1990, 134), **W 7/89** and **W 59/90**).

6.2 Examination as to novelty and inventive step

In **W 12/89** (OJ 1990, 152) the board had examined the legal position and, given the difference of opinion between the boards, had referred, inter alia, the following questions to the Enlarged Board of Appeal (**G 1/89**):

"Does an International Searching Authority have the power to carry out a substantive examination of an international application in respect of novelty and inventive step when considering under Art. 17(3)(a) PCT whether the application complies with the requirement of unity of invention set forth in R. 13.1 PCT?

If an International Searching Authority does have such power, in what circumstance does it have an obligation to carry out such a substantive examination?"

The Enlarged Board of Appeal delivered its decision in **G 1/89** (OJ 1991, 155) and **G 2/89** (OJ 1991, 166). It found that in accordance with normal terminology, the term "examination" or "substantive examination" referred to the activities of the authorities responsible for deciding on patentability, such as the examining division of the EPO, or, in the case of the PCT, to the activities of the IPEA and/or the designated Office. Obviously, an ISA did not have any power to carry out such activities. The Enlarged Board held that an ISA might only form a **provisional opinion** on novelty and inventive step for the purpose of carrying out an effective search. This opinion was in no way binding on the authorities referred to above. The same principle applied also when an ISA considered that an international application did not comply with the requirement of unity of invention set forth in R. 13.1 PCT on an "a posteriori" basis. Such consideration had only the procedural effect of initiating the special procedure laid down in Art. 17 PCT and R. 40 PCT and was, therefore, not a "substantive examination" in the normal sense of that term. According to the decision an assessment of whether a single general inventive concept existed was to be undertaken only **in so far as** this was necessary to establish whether the invention complied with the requirement of unity when implementing the procedure laid down in Art. 17 PCT and R. 40 PCT. Such an assessment was **provisional** and did not constitute a substantive examination in the sense of an examination as to patentability (see **W 6/90**, OJ 1991, 438).

The Enlarged Board further noted that consideration by an ISA of the requirement of unity of invention should, of course, always be made with a view to giving the applicant fair treatment and that the charging of additional fees under Art. 17(3)(a) PCT should be made only in **clear cases**. In particular, in view of the fact that such consideration under the PCT was being made without the applicant having had an opportunity to comment, the ISA should exercise restraint in the assessment of novelty and inventive step and in border-line cases preferably refrain from considering an application as not complying with the requirement of unity of invention on the ground of lack of novelty or inventive step (see **W 24/90**, **W 23/91**, **W 43/91**).

In **W 1/97** the board held that there was no such clear case where the ISA, having already searched part of the subject matter, was still not in a position to identify several separate inventions.

After the Enlarged Board of Appeal's decision, the boards repeatedly used a lack of novelty

or inventive step in the general inventive concept underlying the invention to justify a finding of lack of unity of invention (see **W 17/89**, **W 27/89**, **W 18/90** and **W 19/90**).

In **W 2/92** the board pointed out that according to the PCT Preliminary Examination Guidelines to be carried out under the PCT, Chapter III, 7.6, which is binding for the EPO acting as IPEA (see decisions **G 1/89** and **G 2/89** (OJ 1991, 155 and 166)), although lack of unity of invention should certainly be raised in clear cases, it should neither be raised nor persisted with on the basis of a narrow, literal or academic approach. Moreover, the benefit of any doubt should be given to the applicant. These Guidelines also state that reasons of economy may make it advisable for the examiner to avail himself of the option referred to in R. 68.1 PCT by choosing not to invite the applicant to restrict the claims or to pay additional fees (see PCT Preliminary Examination Guidelines, Chapter III, 7.10, Chapter VI, 5.9) (see **W 6/96**).

In **W 10/92** the board stressed that the **problem-solution** approach was to be applied to unity of invention (**W 16/91**, **W 21/91**).

7. The single general inventive concept

7.1 A single general concept

When deciding on unity of invention, it is mandatory under R. 13.1 PCT to determine whether or not a group of inventions claimed in an international application forms a single general inventive concept. Thus, when seeking to establish at the search stage whether inventions comply with the requirement of unity, the first question to be considered is whether the inventions are linked by a single general concept.

In **W 19/89** the board decided that the application clearly lacked unity of invention, since the four possibilities comprised by claim 1 related to a further development of the state of the art in different directions, namely by employing different classes of dehalogenation agents having no new technical feature in common. Where at least one solution of the underlying technical problem already formed part of the state of the art, the requirement of a "single general inventive concept" implied that the further solutions to that problem proposed in the application must have at least one new element in common, this new element being normally represented by at least one new technical feature. Since the absence of such a unifying new technical feature was admitted by the applicant, the application related to more than one invention.

A useful analysis of the single general concept was made in **W 6/90** (OJ 1991, 438). The board found that this concept manifested itself in features common to different teachings expounded individually in the same application. It observed that a teaching for the purposes of patent law encompassed not only the immediate **subject-matter** representing the solution to the problem as defined in the relevant claim, but also its **technical consequences** which were expressed as **effects**. It was noted that any subject-matter was defined by structural features and the relationship between them. The relevant effects, ie the outcome or results achieved by the invention as claimed, would usually already be apparent from the problem as stated. A single general concept might therefore be said to be present only if a partial

identity existed between the teachings in an application deriving from the structural features of the subject-matters claimed and/or the outcome or results associated with those subject-matters.

Where subject-matters of the **same category** were concerned, a partial identity, generating unity of invention, could result from the structural features of these subject-matters and/or their associated effects. The absence of such an **element common** to all the different teachings in the application, and hence a lack of unity, might be established **a priori** under certain circumstances. A lack of unity might, however, also be established **a posteriori** between the subject-matters of different independent claims or in the remaining subject-matters if the subject-matter of a linking claim was clearly not novel or inventive vis-à-vis the state of the art. The board gave an example of what was meant by the abstract term "single general concept": a product, a process specially adapted for the manufacture of the said product, and a use of the said product, for example, embodied a single general concept because, on the one hand, the partial identity between the product and its use derived from the structural features of the product and, on the other hand, the partial identity shared by the product and the process specially adapted for its manufacture also derived from the product which was to be considered as the effect or result of this process (see **T 119/82** (OJ 1984, 217), reasons, 11).

The board also noted that the criteria governing unity of invention for the purposes of R. 13.1 PCT elucidated above also applied in principle where the inventive step was based chiefly on the discovery of an **unrecognised problem** (see **T 2/83**, OJ 1984, 265). If the common problem, ie the effects to be achieved, was itself already known or could be recognised as generally desirable (a mere desideratum) or obvious, there would be no inventive merit in formulating the problem. If the common structural features were to be found only in the prior art portions of the claims, and if these known features did not help to solve the problem of the combined whole, this might also indicate a lack of unity.

In **W 38/90** the sole common link between the subject-matter of claims 1, 2 and 4 was that the respective features all contributed to the realisation of the same device - a viewing assembly for a door. The board observed that this common pre-characterising feature was confined to indicating the designation of the invention, as part of the prior art; it was not, however, a specific feature interacting with the remaining characterising features and thereby contributing to the various inventions and their effects. Therefore, this sole link had to be rejected as irrelevant as regards any possible contribution to inventiveness. As already concluded, in the absence of any kind of common relevant feature, no unity "a priori" could be recognised.

In **W 32/92** (OJ 1994, 239) the board held that there was no unity of invention where the subject-matters of independent claims, including their effects, had no common inventive feature in those parts of the claims differing from the closest prior art.

In **T 861/92** the apparatus claimed was specifically adapted for carrying out **only one step** of the claimed process. The board came to the conclusion that the subject-matter of the claims satisfied the requirements of Art. 82 EPC as there was a technical relationship between both inventions.

7.2 Inventive character of the single general concept

R. 13.2 PCT defines the method for determining whether the requirement of unity of invention is satisfied in respect of a group of inventions claimed in an international application. It states: "Where a group of inventions is claimed in one and the same international application, the requirement of unity of invention referred to in R. 13.1 PCT shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features. The expression "special technical features" shall mean those technical features that define a **contribution** which each of the claimed inventions, considered as a whole, makes over the prior art."

In **W 17/89** the board found that once such a single, ie common, concept was established, it was necessary to consider whether or not the same could contribute to the inventiveness of the various subject-matters claimed in the case. Nothing indicated that this concept was known or belonged to the general knowledge of the man skilled in the art. Since the search examiner did not indicate that the documents cited in the case could exclude such a contribution, it could not be assumed that this could not be the case (see **W 6/90** above). In view of this, a single inventive concept had to be attributed to all claims linking all their subject-matters (see **W 22/91**).

In **W 6/90** (OJ 1991, 438) (see above) the board further noted that for the purposes of unity of invention, R. 13.1 PCT also stipulated that the single general concept had to be inventive. Even with a given single general concept there was lack of unity if the concept had no inventive character. The boards of appeal have confirmed the above decision on several occasions (see, for example, decisions **W 31/91**, **W 29/92**, **W 34/92**, **W 45/92**, **W 8/93** and **W 6/97**).

In **W 48/90** and **W 50/90** the board noted that as far as chemical compounds were concerned, unity of invention was no mere question of the respective structural features, but had to be decided taking into account the technical problem to be solved and whether or not the respective compounds contributed to the solution found.

In **W 45/92** the board stated that the term "inventive" could not be interpreted as a requirement for the common part to be inventive per se and therefore claimable as such. The investigation in this respect should concentrate on whether or not all or some of such features could contribute to the later detailed consideration of the inventive steps. Only if the already taught state of the art or common general knowledge showed, without reasonable doubt, that this was not possible in the circumstances, should non-unity be declared. It further held that the term "same or corresponding **special** technical features" recognised that the features should define a **contribution** to the invention vis-à-vis the prior art. As the features in question were also part of the most relevant state of the art, where they were set out in an identical manner, they could not provide such a contribution. Thus, the various inventions, if any, had to lie in the unshared specific characterising features in each case. Since the claims contained no other common feature between them in the characterising part, this confirmed the conclusion of lack of unity (see **W 32/92**, OJ 1994, 239 above).

In **W 38/92** the board confirmed **W 6/90** (above) and noted that the common features in the

II.C.7. The single general inventive concept

claim groups represented the "sole concept" linking the various subject-matters. The board stated that the remaining question was whether or not any of these specific features in the claim groups or their combination could make a contribution to the inventive steps relating to each claimed subject-matter; if so, this would render the said concept linking the various subject-matters inventive. The board observed that the new R. 13 PCT also required such a contribution by the suggested common "special technical features" over the prior art, ie that more than novelty be provided. In **T 94/91** the board made it clear that the general inventive concept could not be equated with the features cited in a claim or in a particular combination of claims. What should be considered was the inventive concept as defined in the claims with due regard to the description and any drawings (see **W 2/95**).

In **W 9/93** the board noted that the intermediate compounds were known, so that these products could not serve as a common inventive concept, and that a technical feature contained in the process claims was also known. The board pointed out that a technical feature which already formed part of the state of the art could not, by definition, make a contribution over the prior art and did not, therefore, qualify as a unifying element within the meaning of R. 13.1 PCT. The board observed that, according to R. 13.2 PCT, as in force from 1.7.1992, an international patent application may relate to a group of inventions if there was a "technical relationship" among those inventions involving one or more of the same or corresponding "special technical features", ie such technical features that defined a contribution which each of the claimed inventions made over the prior art. The board went on to say that R. 13.1 PCT did not simply require some link between a group of inventions claimed in an international patent application, but a **common inventive concept**. This meant that there must be either a common technical problem or at least, if there was more than one technical problem, there must be one single technical concept behind the solutions of these different problems. Neither of these conditions was, however, met in this case.

In **T 957/96** the application described a number of processes which did not have any process step in common. The board found that in this case the decisive fact for the question of unity of invention was that all the processes claimed shared a common technical feature, namely the use of the substantially pure regioisomer, which was essential for solving the technical problem addressed by the application. It was this **use of the intermediate** compound which formed the common "inventive" concept of all the claimed process variants. In other words, this feature constituted a **special** technical feature which defined the contribution that the claimed invention made over the prior art as required by R. 30(1) EPC.

In **W 11/99** (OJ 2000, 186) the board held that if, in an international patent application, there are **claims directed to products and to a process for the manufacture thereof**, it could not be assumed that there were no corresponding special technical features within the meaning of R. 13.2 PCT simply because the process could also be used to manufacture other products.

The board interpreted the requirement for the presence of "corresponding special technical features" under R. 13.2 PCT in cases where a manufacturing process and products were being claimed in the same application to mean that they could usually be assumed to be present where the production process is new and actually suited to making the claimed products (where appropriate in addition to further products) accessible. In such cases the

board regards the process as being "specially adapted" to the manufacture of the claimed products. A narrower interpretation of the terms "specially adapted" and "corresponding special technical features" would not fulfil the legislative purpose of Art. 34(3) PCT and associated R. 13.1 PCT, which, in the board's view, was the same as that of Art. 82 EPC, namely to prevent subject-matters which were not interconnected being claimed in one and the same application. This interpretation accorded with Annex B to the Administrative Instructions under the PCT mentioned in PCT Guideline III-7.2 in the version of 1 July 1998, where it is stated in Part 1, item (e), that a process is specially adapted for the manufacture of a product if it inherently results in the product. If this condition was met, it was irrelevant whether other products could be obtained using the process.

7.3 Unity of single claims defining alternatives ("Markush claims")

The situation involving the so-called "Markush practice" wherein a single claim defines alternatives is also governed by R. 13.2 PCT. According to R. 13.3 PCT, the determination of whether a group of inventions is so closely linked as to form a single general inventive concept shall be made without regard to whether the inventions are claimed in separate claims, or as alternatives within a single claim (see **W 35/91**).

Paragraph 1 of Chapter VII of the PCT Search Guidelines on unity of invention requires that when assessing unity in accordance with the principles set out in R. 13.2 PCT to R. 13.4 PCT, Section 206 and Annex B of the Administrative Instructions under the PCT as in force from 1 July 1992 must be observed. Annex B, Part 1(f) specifies certain criteria for assessing the unity of Markush claims, and in particular that for alternatives contained in such claims the requirement of a technical interrelationship and the same or corresponding special technical features as defined in R. 13.2 PCT are to be considered to be met when the alternatives are of a similar nature (see **W 3/94**, OJ 1995, 775).

In **W 1/94**, the EPO acting as ISA had found that the compounds according to the "inventions" it had identified did not have a new structural element. Nevertheless the board concluded that the absence of such an element did not automatically destroy the unity of the invention. On the contrary, it was clear from the Administrative Instructions under the PCT that a technical relationship must be recognised for a group of alternative chemical compounds, such as all the compounds having a common property or activity, and such a **common activity** existed in the case in point. The new use could therefore form the general inventive concept linking the subject-matters of the claims in accordance with R. 13.1 PCT and had to be treated as a functional characteristic linking the compounds claimed.

In **W 6/95** the board noted that it follows from Part 1(f)(i) of Annex B of the Administrative Instructions under the PCT, which were binding not only for the ISA but also for the board of appeal acting as the "three-member board" according to R. 40.2(c) PCT (see decision **G 1/89**, OJ 1991, 155) that it was not sufficient, in order to establish unity of invention "a posteriori" for all alternatives of chemical compounds covered by a Markush claim to have a common property or activity, ie be suitable for solving a common technical problem, because according to item (B)(1) they had, in addition, to have a "significant structural element" in common in order for the alternatives to form unity. The board made it clear that it was, however, not in agreement with the explanation given in Part 1(f)(ii) of Annex B of the

Administrative Instructions under the PCT to assume that the said "significant structural element" had to be novel per se. Rather, this expression meant that in relation to the said **common property or activity** there had to be a common part of the chemical structure which distinguished the claimed compounds from known compounds having the same property or activity (see also **W 6/97**).

In **T 169/96** the examining division was of the opinion that in the case before it such a single general inventive concept was not present, since the structural alternatives comprised by formula A, which had a common property, did not share a common significant structural element, and, according to the Guidelines, C-III, 7.4a, which referred to the text of R. 30 EPC (old version), a common new use of known and novel chemical compounds was not in itself sufficient to establish a common inventive concept within the meaning of Art. 82 EPC. The board noted that the fact that one claim also comprised a known compound, not covered by another claim 2, was of no relevance to the question of unity, because R. 30(b) EPC (old version in force until 31.5.91) (also under its new version) did not require that there must be a common concept unifying different "means" according to it. In other words, it was not relevant in these circumstances that the three different classes of chemical compounds identified by the examining division comprised completely different chemical structures of a residue. The board observed that the above-mentioned Chapter of the Guidelines, as well as the corresponding Part 1(f) of Annex B of the Administrative Instructions under the PCT concerning the examination of unity of invention of so-called Markush-type claims rightly stated that the said significant structural element might consist of a combination of individual components linked together. It was not stated there that the combination of individual structural elements had to be novel per se, nor did such a requirement follow from Art. 82 EPC. Rather it followed from that guideline that this expression meant that in relation to the said common property or activity there had to be a common part of the chemical structure which distinguished the claimed compounds from known compounds having the same property or activity. In the present case no state of the art was cited which related to chemical compounds which were known to be useful for the production of polymeric compositions of enhanced oxidative stability. The combination of the peroxide group and the residue "An" which was responsible for conferring the oxidative stability, however, distinguished the compounds of claim 2 from all chemical compounds conventionally used as antioxidants in polymeric compositions, on the one hand, and from all compounds conventionally used as polymerisation initiators, on the other hand.

In **W 4/96** (OJ 1997, 552) the board of appeal noted that the requirement of a technical relationship as defined in R. 13.2 PCT, first sentence, might be met when all claimed alternatives belong to a class of compounds which might be expected to behave in the same way in the context of the claimed inventions ("Markush claims"). The technical relationship involved those common **special** technical features that defined a contribution over the state of the art (R. 13.2 PCT, second sentence)(see also **W 6/96**). However, such contribution could not be recognised on the basis of this expectation if members of the class had already been shown in the prior art to behave in the manner disclosed in the application. The board added that if at least one Markush alternative was not novel over the prior art, the question of unity had to be reconsidered by the examiner, ie a posteriori (see Annex B to the Administrative Instructions under the PCT Part I (f)(v) in conjunction with the PCT Search Guidelines).

The board also held that an objection of lack of unity could be raised a posteriori with regard to all categories of grouping of alternatives of chemical compounds. An a posteriori assessment of unity had to be made in all circumstances in the same way, since the legal requirement of R. 13 PCT was the same for all cases. Therefore, the a posteriori assessment of unity in cases of a **functional relationship** within a group of compounds had to be made in a manner corresponding to the assessment in cases of a **structural relationship**. This was appropriate for compounds related by their structure as well as for compounds related by their function. The structural relationship within the meaning of Annex B, Part I (f)(i)(B)(1) and the relationship within the meaning of Annex B, Part I (f)(i)(B)(2) and (iii) served the **same purpose**: both tests were intended to show whether the alternative compounds were of a similar nature, as was said in the introductory part of Annex B, Part I (f)(i). These tests were only tools in order to determine whether there was unity of invention as defined in R. 13 PCT.

8. Plurality of inventions and further search fees

8.1 Consequences of non-payment of a further search fee

If the search division raises the objection of lack of unity of invention a further search fee must be paid in accordance with R. 46(1) EPC or Art. 17(3)(a) PCT for each invention involved. If the fee is paid in due time the applicants may select the single invention or group of inventions they wish to retain in the main application.

The consequences of non-payment of the further search fee for the procedure for the grant of a European patent have been the subject of conflicting interpretations on the part of the boards. While it was stated in **T 178/84** (OJ 1989, 157) that in the case of non-payment of the further search fee under R. 46(1) EPC the subject-matter not searched was regarded as abandoned and accordingly could not be pursued in the parent application, in **T 87/88** (OJ 1993, 430) it was expressly stated that non-payment could not result in abandonment. The board stated that non-payment of the further search fee in no way prejudiced the future legal fate of the unsearched parts and that R. 46(1) EPC merely provided that in the case of non-payment of further search fees the search division was to draw up a European search report only for those parts of the application that related to the invention for which the search fees had been paid.

The President of the EPO therefore referred the following point of law to the Enlarged Board of Appeal: "Can an applicant who fails to pay further search fees for a non-unitary application when requested to do so by the search division under R. 46(1) EPC pursue that application for the subject-matter in respect of which no search fees have been paid or must he file a divisional application for it?"

In **G 2/92** (OJ 1993, 591) the Enlarged Board of Appeal decided that the application could not be pursued for subject-matter in respect of which the applicants had not paid the further search fees. Instead the applicants had to file a divisional application for that subject-matter if they wished to continue to protect it. In the view of the Enlarged Board, it was clear from the procedural system of the EPC that the invention which was to be examined for patentability had to be an invention in respect of which a search fee had been paid prior to the drawing up of the European search report. Part IV of the EPC envisaged that an application

progressed after filing from the search division to the examining division. One object of R. 46 EPC was to implement this procedure by ensuring that an appropriately extensive search was completed in respect of each individual application before it was examined by the examining division. To this end, in response to an invitation from the search division to pay one or more further search fees in respect of one or more further inventions to which the application related, applicants had to pay such further search fees if they wished to ensure that one of the further inventions could become the subject of the claims of that application. That was the proper interpretation of R. 46(1) EPC in context. This confirmed the practice according to **T 178/84** (see Guidelines C-VI, 3.2a).

In **T 319/96** the initial application lacked unity, but no further search fee was paid. The applicant took the view that, because of the international-type search (Art. 15(5)a) PCT) carried out by the EPO for the subject-matter of the original claims 4 to 10, it had not forfeited its right to choose and could therefore continue pursuing this subject-matter. It had paid a search fee for each of the two inventions, and two search reports had been prepared by the Office. Since the appellant insisted on pursuing the second invention further, the application was refused under Art. 97(1) EPC in conjunction with Art. 82 EPC and R. 46 EPC.

The board stated that, under R. 46(1) EPC, a search fee was to be paid for each further invention if the European search report was to cover that invention. It was true that an international-type search report had been drawn up under Art. 15(5)a) PCT for the subject-matter of the second invention in the context of another procedure, ie the national procedure for the purpose of establishing priority; however, this could not simply replace the European search report. R. 46 EPC did not provide that a search report from another procedure could be substituted for the European search report. Rather, the Rules relating to Fees (RFees) provided that a search report on the same subject-matter, if prepared by the Office outside the context of the European grant procedure acting in a different capacity on the basis of other treaties, should be taken into consideration in so far as the European search fee was partly or wholly refunded (Art. 10(2) RFees). The restitution was therefore made by "rolling back", not by waiving the European search fee. For this reason, R. 46 EPC did indeed apply here, and the appellant would have been obliged to pay the further search fee in order to retain the option of pursuing the second invention in the application at issue.

In **T 631/97** (OJ 2001, 13) the board held that R. 46(1) EPC on its proper interpretation does not prohibit a review by the examining division of the search division's opinion on lack of unity of invention where further search fees are not paid. A narrow interpretation of R. 46(1) EPC whereby the finding of lack of unity of invention by the search division is considered as final where the additional search fees are not paid would deprive the applicant of an opportunity to dispute the finding of the search division during the examination proceedings and would also unjustifiably restrict the power of the examining division on the question of unity of invention to the subject matter for which search fees were paid. Thus the board did not share the view held in **T 1109/96**. The board found that the above interpretation of R. 46(1) EPC was in agreement with that of the Enlarged Board of Appeal in Opinion **G 2/92**. It also found that the Guidelines were fully consistent with **G 2/92** and R. 46 EPC.

The board noted that the present practice of search and examination of international applications under the PCT where the EPO is elected or designated office were also

consistent with the above view : R. 112 EPC which entered into force on 1 March 2000 (OJ 1999, 660-667) requires that the EPO examines the requirement of unity of invention of an international application entering the EPO as a Euro-PCT application, also for the case when the ISA considered that the application did not comply with the requirement of unity of invention (R. 13.1 PCT and R. 13.2 PCT), and the applicant did not pay additional search fees according to Art. 17(3)(a) PCT.

8.2 Dispensing with further search fee

In **W 36/90** and **W 19/89** the board observed that where there was lack of unity in an international application, in particular if the objection was evident a posteriori, the search examiner might decide to supplement the international search with a search on the additional inventions as well as on the first invention. This was so particularly if the concepts of the inventions were very close and none of them required a search in different classification units, so that the search could be performed for all the inventions without creating too much extra work (see PCT Search Guidelines as agreed upon by the Interim Committee for Technical Cooperation at its seventh session in Geneva in October 1977 (PCT/INT/5)). In such a case no objection of lack of unity should be raised because charging further fees would be incompatible with the principle of equity vis-à-vis the applicant (see **G 1/89**).

8.3 Further invitations to pay additional search fees

According to the PCT Search Guidelines (PCT Gazette No. 30/1992, 14025), if the ISA considers that the international application does not comply with the requirement of unity of invention, it must search and draw up the international search report for those parts of the international application which relate to the invention (or group of inventions forming unity) first mentioned in the claims and those parts of the international application which relate to inventions for which additional fees have been paid.

In **W 1/97** (OJ 1999, 33) during the pending procedure on the applicants' protest concerning the first invitation to pay an additional search fee, the ISA sent a second and a third invitation to pay further additional search fees. The board noted that these invitations were only valid if the relevant provisions provided a legal basis for further invitations. The board could see no such basis. The board noted that although Art. 17(3)(a) PCT and R. 40 PCT did not deal expressly with the question whether a series of successive invitations was possible, the matter was covered by the PCT Search Guidelines (PCT Gazette No. 30/1992, 14025). According to Chapter VII, 2, second sentence, of these Guidelines the invitation to pay additional fees "must identify the separate inventions and indicate the amount to be paid". This had to be seen in connection with the provision that the search report had to be made on those parts of the international application for which additional search fees had been paid (see above). This meant that the search report had to be made on those separate inventions identified in the invitation for which additional fees had been paid. This system prevented further separate inventions being identified in a later stage of the proceedings for the purpose of collecting further search fees. The PCT Search Guidelines repeated the above general requirements expressly for the situation of an a posteriori finding of non-unity (Chapter VII, 10), stating even more clearly that the number of additional search fees to be paid had to be indicated. The obligation of the ISA to identify in the first and only invitation the separate

inventions for which the applicant had to pay additional fees in order to receive a **complete search report** served the purpose of giving the applicant a sound basis for his decision whether the payment of the additional fees was in his interest. Such a basis was only given if he knew what he was to receive in return for the fees to be paid.

The board concluded that within the current system under the PCT it was not possible to use the final search result as a basis for charging additional fees. On the contrary, the invitation to pay additional search fees had to be sent before the search report was established. This implied that the result of the search on those parts of the international application for which fees had been paid might entail a posteriori objections of non-unity not considered in a previous invitation to pay additional search fees. In addition, the ISA was obliged to establish the international search report within three months from receipt of the search copy or nine months from the priority date (R. 42.1 PCT). In most cases this left no time for successive invitations to pay additional search fees on the basis of the result of the search at the time of each invitation. As the present case illustrated, successive invitations to pay additional search fees could have the consequence that the question of unity of invention became pending before different instances at the same time. This could be in conflict with basic principles of procedural law which also applied to protest cases (see **W 53/91**). Once a protest was filed, the EPO acting as ISA remained competent only for the prior review of the justification of the invitation already issued (R. 40.1(e) PCT). It was not entitled to raise the question of non-unity a second or third time in the same search procedure.



III. AMENDMENTS

A. Article 123(2) EPC

According to Art. 123(2) EPC a European patent application or a European patent may not be amended in such a way that it contains subject-matter which extends beyond the content of the application as filed.

1. Content of the application as originally filed

1.1 General issues

Regarding the concept of the content of the application, **G 11/91** (OJ 1993, 125) laid down (see Reasons, point 1.4) that it related to the parts of the European patent application which determined the disclosure of the invention, namely the description, the claims and the drawings. Similarly, it was recently reaffirmed that the description, claims and any drawings in the application documents determined the content of the application as filed (**G 2/95**, Reasons, point 4 (OJ 1996, 555), **T 382/94**, Reasons, point 7 (OJ 1998, 24)).

In **T 246/86** (OJ 1989, 199), the board decided that as the abstract was intended solely for documentation purposes and did not form part of the disclosure of the invention, it could not be used to interpret the content of the application for the purposes of Art. 123(2) EPC. For the purpose of Art. 123(2) EPC, "the content of the application as filed" also did not include any priority documents, even if they were filed on the same day as the European patent application (**T 260/85**, OJ 1989, 105).

In **T 605/93** the board held that where the application documents of the European application as filed were a translation of the international application as it was filed, the content of the "application as filed" (for the purpose of Art. 123(2) EPC) was that of the international application as it was filed. In all normal circumstances, it ought however to be assumed that the published European application was identical in content with the published international application.

In **T 382/94** (OJ 1998, 24) a European patent application was filed with a description and claims in German, accompanied by 25 drawings. Three of the drawings contained so-called flow sheets with text matter in English. The application was published in this form.

In the board's view, this raised the question whether text matter in drawings which was couched in an official language other than the language of proceedings was part of the content of the application as filed, and whether in this respect it was possible to correct the application.

The board argued that, under Art. 80(d) EPC, the accordance of the date of filing depended on whether the documents filed by the applicant contained "a description and one or more claims" in an EPO official language. However, the EPC did not make the accordance of the date of filing dependent on whether any text matter in the drawings was in a language in

accordance with Art. 14(1) and (2) EPC. If drawings were submitted in full on the date of filing, the establishment of the filing date could not be dependent on whether they contained text matter in a language other than the language of proceedings. The special provision under Art. 91 EPC in conjunction with R. 43 EPC related exclusively to the question of whether any drawings were filed at all on the date of filing.

The accordance of a date of filing could relate only to the whole of the application documents. And under Art. 123(2) EPC, the limits for changing or correcting the parts of an application affecting the disclosure were defined by what a skilled person would derive from the whole of these documents as filed. It appeared to be alien to the EPC not to consider certain parts of the description, claims or drawings actually filed on the date of filing to be part of the documents as filed. The amendment of the application, based on the English-language text matter in the drawings as filed, did not represent an infringement of Art. 123(2) EPC.

In **T 287/98**, the word "scrap" originally comprised in the disputed passage of the English version of the application, which means "refuse or waste in general" had been replaced in claim 1 by "scrap metal". The original application in Dutch contained the word "schroot", which means scrap metal, as substantiated by the copies of various dictionaries provided by the appellant.

According to the board, this word was not correctly translated into English and nothing other than "scrap metal" was meant in the application as originally filed. The board further decided that the replacement of the word "scrap" by "scrap metal" was allowable under Art. 123(2) EPC since Art. 70(2) EPC provides that in a case referred to in Art. 14(2) EPC, i.e. in which the European patent application is filed in a language of a contracting state other than English, French or German, the original text must be taken into account in proceedings before the European Patent Office, in order to determine whether the subject-matter of the application extends beyond the content of the application as filed.

In **T 792/94** the board ruled that since the teaching of claim 1 as amended was ambiguous (Art. 84 EPC), allowing scope for an interpretation which extended beyond the overall teaching of the initial application, the amendment contravened Art. 123(2) EPC.

Decisions **T 673/89** and **T 685/90** prohibited the later inclusion of **equivalents**. **T 673/89** concerned a dual circuit braking system. The board held that the mere fact that the original claim did not indicate how the signals were transmitted in the brake circuits was not a basis for deliberately supplementing its teaching with a further embodiment not referred to in the application documents as originally filed. In **T 685/90** the board stated that specific equivalents of explicitly disclosed features did not automatically belong to the content of a European patent application as filed, when this content was used as state of the art according to Art. 54(3) and (4) EPC against a more recent application. It therefore concluded that such equivalents could not belong to the content of a European patent application either, when this content was assessed to determine whether an amendment was admissible under Art. 123(2) EPC. In **T 265/88** the board refused to allow originally undisclosed equivalents to be added by using a wider technical term in place of the single technical means originally disclosed. **T 118/88** had concluded that the obviousness of a feature was no replacement for the original disclosure.

III.A.1. Content of the application as originally filed

In **T 40/97** the board considered what the originally filed application taught the person skilled in the art and took the view that in a case where a number of generally similar embodiments were discussed in equivalent terms, the person skilled in the art would, in normal circumstances and when nothing pointed to the contrary, notionally associate the characteristics of an element of one embodiment described in some detail with the comparable element of another embodiment described in lesser detail.

In **T 284/94** (OJ 1999, 464) the board stated that an amendment of a claim by the introduction of a technical feature taken in isolation from the description of a specific embodiment is not allowable under Art. 123(2) EPC if it is not clear beyond any doubt for a skilled reader from the application documents as filed that the subject-matter of the claim thus amended provides a complete solution to a technical problem unambiguously recognizable from the application. Nor is an amendment allowable under Art. 123(2) EPC which replaces a disclosed specific feature either by its function or by a more general term and thus incorporates undisclosed equivalents into the content of the application as filed.

In **T 243/89** the applicant had originally claimed a catheter only for medical use; during examination proceedings he filed a further claim for its manufacture. The board of appeal saw no reason to refuse the filing of an additional method claim for forming the apparatus, in view of the similar wording and thus of the close interrelationship between both independent claims. Provided the result of the activity was in itself patentable, such methods were also patentable unless the disclosure was insufficient.

In **T 157/90** and **T 397/89** it was stressed that it was insufficient for the generalisation of a feature to have only formal support in the application as filed. If, for example, the application as filed only described specific embodiments, and the feature's general applicability was not evident to the skilled person, then generalisation could not be allowed.

In **T 906/97** the board stated that an a posteriori demonstration that the original claims, considered in isolation from the rest of the application documents, could possibly be construed in such a way as to cover a specific type of apparatus failed to provide convincing evidence that such specific apparatus was actually disclosed to the skilled person.

In **T 770/90** the board ruled that an unduly broad claim not supported by the description as originally filed was not a suitable "reservoir" for amendments. In **T 296/96**, on the issue of Art. 123(2) EPC, the board stated that the content of a document was not to be viewed as a reservoir from which features pertaining to separate embodiments could be combined in order to artificially create a particular embodiment. When assessing whether a feature had been disclosed in a document, the relevant question was whether a skilled person would seriously contemplate combining the different features cited in that document. That was not the case in the application as filed.

In **T 54/82** (OJ 1983, 446) the board held that an objection under Art. 123(2) EPC did not necessarily arise when an amendment was proposed which involved combining separate features of the original subject-matter of an application. When considering whether different parts of the description in an application could properly be read together, the state of the art might also be taken into account.

Expanding on **T 13/84** (OJ 1986, 253) it was stated in **T 547/90** and **T 530/90** that reformulating the technical problem was not in breach of Art. 123(2) EPC provided the problem as clarified and the solution proposed could have been deduced from the application as a whole in the form originally filed.

Decision **T 784/89** (OJ 1992, 438) ruled on a computer-controlled method of producing NMR images disclosed explicitly in the documents as filed. By reference to another patent application an apparatus was implicitly disclosed comprising a programmable component which, when suitably programmed, was used for the claimed method. The board considered that only this specific combination had been disclosed. To claim an apparatus for carrying out a method was considered an inadmissible extension of the European patent application because the claim covered apparatus which could also be used in other methods and to achieve other effects. The only allowable claim was for an apparatus for carrying out a method comprising a programmable component which could be suitably programmed to carry out the method.

In **T 526/92** the patent related to an additive concentrate having a high TBN of at least 235 for incorporation in a lubricating oil composition. The application as filed contained no explicit reference to TBN apart from the examples where 235 was the lowest value mentioned. The feature "having a high TBN of at least 235" was introduced during the examination proceedings to distinguish the claimed subject-matter from compositions with low TBN values up to 100 disclosed in a citation.

The board revoked the patent on the grounds that it breached Art. 123(2) EPC, stating that the precondition of the disclaimer had not been met. Subject-matter which was broadly disclosed in generic terms could be delimited even in the absence of express support in the application. In this case, however, TBN values had not been originally disclosed as a "broad" range but only as single, punctate values; thus a new range was defined which had not been disclosed originally. Furthermore, the generic part of the original specification did not contain any information indicating that TBN played any role in the framework of the application in suit. This meant that there was also no information whatsoever concerning a TBN range, whether open-ended or not. Nor was there any information at all in the description regarding the contribution of a TBN to the solution of a technical problem. Moreover, it could not be concluded that the individual TBN values disclosed in the examples were representative of a TBN range starting at 235 and without any upper limit. The board held that there was a contravention of Art. 123(2) EPC where values of a parameter were given only in the examples, without the significance of this parameter becoming evident from the original specification, arbitrarily forming a range which was open-ended in one direction and had one limit selected from the examples in the other.

T 201/83 (OJ 1984, 481) and **T 17/86** (OJ 1989, 297) started from the assumption that a limitation could also constitute an inadmissible extension of the subject-matter of the application. In **T 201/83**, however, the board came to the conclusion that the amendment of the concentration range for a component of a claimed alloy was allowable on the basis of a value described in a specific example since the skilled person could have readily recognised that this value was not so closely associated with the other features of the example as to determine the effect of that embodiment of the invention to a significant degree. The new limit

could therefore be deduced from the original documents. In **T 17/86** the examining division took the view that, although the introduction into a claim of a particular technical feature constituted a limitation, it nevertheless contravened Art. 123(2) EPC since the feature concerned had been described in the application solely in association with another feature not included in the claim. The board, however, stated that the application as filed unmistakably showed that the combination of technical features in the new claim thus amended was sufficient to produce the result sought in the application.

In **T 1067/97** the board confirmed that if a claim was to be restricted to a preferred embodiment, it was normally not admissible under Art. 123(2) EPC to extract isolated features from a set of features which had originally been disclosed in combination for that embodiment. An amendment of this nature would only be justified in the absence of any clearly recognisable functional or structural relationship among said features.

In **T 582/91**, the respondent/opponent was of the opinion that when restricting a granted claim by introducing subject-matter from the dependent claims all the features of the dependent claims in question should be incorporated in the new independent claim. Contrary to this opinion the board considered that one feature of a dependent claim could be readily combined with a preceding independent claim as long as the skilled person recognised that there was clearly no close functional or structural relationship between the one feature of that dependent claim and its other features, or between that one feature and the teaching of other dependent claims referred to in that dependent claim. If this was the case, no objections under Art. 123(2) EPC arose (confirmed in **T 938/95**, see also **T 288/89**).

In **T 615/95** there were three independent lists of sizeable length specifying distinct meanings for three residues in a generic chemical formula in a claim. One originally disclosed meaning was deleted from each of the three independent lists.

The board stated that the present deletions did not result in singling out a particular combination of specific meanings, i.e. any hitherto not specifically mentioned individual compound or group of compounds, but maintained the remaining subject-matter as a generic group of compounds differing from the original group only by its smaller size. Such a shrinking of the generic group of chemical compounds was not objectionable under Art. 123(2) EPC, since these deletions did not lead to a particular combination of specific meanings of the respective residues which was not disclosed originally or, in other words, did not generate another invention.

1.2 Technical contribution: addition or deletion of a feature

G 1/93 (OJ 1994, 541) stated that the underlying idea of Art. 123(2) EPC was clearly that an applicant should not be allowed to improve his position by adding subject-matter not disclosed in the application as filed, which would give him an unwarranted advantage and could be damaging to the legal security of third parties relying on the content of the original application. If, however, an added feature merely excluded protection for part of the subject-matter of the claimed invention as covered by the application as filed, the adding of such a feature could not reasonably be considered to give any unwarranted advantage to the applicant. Nor did it adversely affect the interests of third parties. Therefore, a feature which

had not been disclosed in the application as filed but which had been added to the application during examination was not to be considered as subject-matter which extended beyond the content of the application as filed within the meaning of Art. 123(2) EPC, if it merely limited the protection conferred by the patent as granted by excluding protection for part of the subject-matter of the claimed invention as covered by the application as filed, without providing a technical contribution to the subject-matter of the claimed invention (see also **T 112/95**).

The question of whether an added feature made a technical contribution or merely limited the scope of protection was discussed in several decisions.

In **T 384/91** of 27.9.1994 (OJ 1995, 745) it was held that the added feature did make a technical contribution. This decision was based on the following considerations: the example mentioned by the Enlarged Board illustrated a case where the feature was clearly not merely a limitation. However, the borderline beyond which a feature was no longer to be considered as making a technical contribution to the subject-matter of the claimed invention and was merely limiting the protection conferred, was not co-terminous with this example but lay between it and the limit of complete technical irrelevance. According to the board this view was consistent with the fact that the Enlarged Board had rejected relevance as a criterion for novelty and inventive step, which would also have implied a comparison with the cited prior art documents. Thus the board also rejected the argument that the condition that the feature must not make a technical contribution to the subject-matter of the claimed invention applied to "inventions". These "inventions" therefore, had to be "identified" by assessing novelty and inventive step in order to see whether they really were "inventions" and, if so, on the basis of which features. The board explained that the term "invention" did not necessarily imply the presence of novelty and inventive step, as was apparent from the wording of Art. 52 EPC, Art. 54 EPC and Art. 56 EPC.

The board concluded that there was no need to take into account the prior art documents, but that the assessment of whether the exception for mere limitations applied in a particular case should depend only on the technical relationship of the added feature to the content of the application as originally filed, as understood by a skilled reader. At the least, a feature went beyond providing a mere limitation not involving a technical contribution to the invention if it interacted with the way in which the other features of the claim solved the technical problem, as it was understood from the application as originally filed.

In **T 526/92** (see above) the patentee also submitted that the feature of a "TBN of at least 235" was of great importance for limiting the scope of protection but of no relevance to the originally disclosed technical teaching and that, therefore, following **G 1/93**, the amendment was allowable as merely excluding protection for concentrates having a TBN of less than 235. According to the board, the addition of the feature concerned made a technical contribution to the claimed invention because it not only introduced a technical parameter on which no information had been available in the original specification, but, moreover, selected a particular range which had not originally been disclosed. Furthermore, by not disclosing the particular state of the art of the citation but selecting a TBN of 235 as a lower limit the applicant had gained more distance from this state of the art which had improved his position at least in relation to inventive step; such improvement would be an unwarranted advantage.

III.A.1. Content of the application as originally filed

In case **T 64/96**, a patent relating to a cover for automobile sun visor mirrors comprising rectangular plates overlapping and connected together in chain-like succession was revoked by the opposition division. The third auxiliary request of claim 1 was amended in that it was included as an additional feature that lugs were "integrally formed in said plates".

The appellant/patent proprietor argued first that this feature was disclosed, at least implicitly, in the original application. Indeed since the plates were described according to the appellant as being of plastics, the person skilled in the art would not seriously consider forming the plates without lugs and then attaching the lugs thereafter, for to do so would unnecessarily increase the production costs of what was after all a mass-produced article. The appellant also argued in the alternative that the requirement that the lugs be "integrally formed in said plates" was of this class of feature allowed (in short: no technical contribution) by **G 1/93** (OJ 1994, 541). In particular the appellant argued in this respect that all he was doing was limiting the scope of protection of the patent by means of non-inventive selection since the original application covered both integrally formed lugs and separately formed lugs subsequently attached to the plates.

In the board's opinion the first line of argument confused two essentially different questions, namely what the person skilled in the art would do on the basis of his general common knowledge when seeking to put the teachings of the original application into practical effect and what the original application directly and unambiguously disclosed to him. The answer to that second question was that the skilled person was told that the plates "are provided" with lugs, nothing else. That statement certainly included the possibility of forming the lugs integrally with the plates but did not disclose it.

The board then examined the second line of argument and came to the conclusion that applying the criterion, set out in **G 1/93** (OJ 1994, 541) and **T 384/91** (OJ 1995, 745), to the present case it could be seen that the feature in question did indeed make a technical contribution to the subject-matter of the claim since forming the lugs integrally with the plates led to a simpler and cheaper construction of cover which, at least by implication, was the technical problem which the invention set out to solve. Thus the addition of this feature to claim 1 of the third auxiliary request offended against Art. 123(2) EPC.

Another question which arose was whether deleting a feature could constitute a technical contribution to an invention.

On this matter in **T 802/92** (OJ 1995, 379), an *ex parte* case, the application as filed contained only product claims relating to "a double heterojunction p-i-n photovoltaic cell having at least three different semiconductor compound layers composed together of at least four different elements, comprising ... first and second ohmic contacts ...". In the course of examination proceedings the applicant also claimed the method of making such a photovoltaic cell. However, the method claim did not contain a feature relating to the formation of first and second ohmic contacts.

The board allowed the deletion of this feature in the method claims. It explained that the aim of the invention was to make photovoltaic cells with certain abilities. This aim was achieved by the use of three different semiconductor layers formed of at least four different elements.

In the board's view, it followed from the description that the presence of ohmic contacts did "not provide a technical contribution to the subject-matter of the claimed invention". Therefore, the presence or absence of such ohmic contacts did not affect the carrying out of the described invention since they were not an essential part of it. The board invoked the principles underlying the interpretation of Art. 123(2) EPC set out by the Enlarged Board in **G 1/93** (OJ 1994, 541, see above). According to the board in this case these considerations were equally applicable to cases where a feature had been removed from a claim or omitted, so as to broaden its protection. Thus the removal from a claim of a feature which did not provide a technical contribution to the subject-matter of the claimed invention and whose removal merely broadened the protection conferred by the claim did not contravene Art. 123(2) EPC.

In **T 10/97** not all the compounds listed in the original claim were included in amended claim 1. However, since the claimed group of compounds was obtained not by restricting an originally disclosed generic definition of a substituent in a generic formula to a specific one selected from worked examples, but by deleting some members from a list of individualised equally useful compounds in order to improve the chances of patentability over the available prior art, the board found that such deletions must be considered admissible in accordance with the case law of the boards of appeal (see **T 393/91**). For the remaining compounds, no particular technical effect was either disclosed or alleged.

1.3 Disclosure in drawings

The case law according to **T 169/83** (OJ 1985, 193), **T 523/88** and, more recently, **T 818/93** showed that the EPC did not prohibit the amendment of claims to include features from drawings, provided the structure and the function of such features were clearly, unmistakably and fully derivable from the drawings by the skilled person and not at odds with the other parts of the disclosure. Nor could any element be dropped.

Indeed, in **T 169/83** (OJ 1985, 193), **T 465/88** and **T 308/90** it was pointed out that where drawings existed they were to be regarded as an integral part of the documents disclosing the invention. Drawings were to be treated on an equal footing with the other parts of the application. Further, the fact that features were disclosed solely in the drawings did not preclude these features from becoming essential in the course of the proceedings (**T 818/93**). The features for which a skilled person could clearly derive the structure and function from the drawings could be used to define more precisely the subject-matter for which protection was sought (**T 372/90**).

In **T 398/92**, the board made particular reference to the case law on this subject. In the case at issue the patent claims as amended contained features that had not been mentioned expressis verbis in the written part of the original application but had been derived from the figures for the application as filed. In this case the drawings in question illustrated the curves in a system of Cartesian co-ordinates with a precise, defined scale. The curves therefore could not be compared to the schematised representation of an invention given by a graph. The board recognised that the points of these curves were not purely intellectual graphic constructions but, on the contrary, corresponded to real experimental values, representing the percentages of a particular drug released in solution. Although these percentages were

not mentioned *expressis verbis* in the original document, the board was of the opinion that for a skilled person they would have been clearly and unambiguously derivable from the scale given on the Y-axis, since the figures were sufficiently precise for the ordinate values to be read exactly and thus for the same numerical features as introduced in the claims to be derived from them. The incorporation into the text of the claims of the numerical features derived from the curves therefore did not contravene Art. 123(2) EPC. As far as **a graph representing a mathematical equation** is concerned, see **T 145/87**. This case related to a process for regulating the print quality of printers which could only be carried out using statistical calculations. On the basis of a formula given *expressis verbis*, its representation as a graph according to the Cartesian co-ordinate system and a basic knowledge of statistics, the possible values of two parameters in the formula, though not expressly disclosed, could be deduced.

In **T 191/93** amendments were based exclusively on the original drawings and introduced only some of the features disclosed in the drawings. The board held that the subject-matter of the patent had been extended compared to the application as filed because it was not derivable from the drawings that the two newly introduced features could be isolated from the other features shown in the drawings. The subject-matter defined in the claims thus amended was ambiguous. In this case, however, the ambiguity could be removed by also introducing into the claim a third feature, disclosed in the drawings as filed, together with the other two features.

In **T 676/90** the applicant wished to delete the rolling-device features of a carrying aid for a pair of skis. The board found, however, that the original documents had disclosed only a carrying aid consisting of a rolling device and a carrying strap or only of a rolling device, but not an option without a rolling device. Nor was the board swayed in its view by the applicant's argument that the carrying strap was shown separately in a drawing. It held firstly that, according to the description, this drawing was an expanded view of the carrying strap shown in Figure 1 (which, moreover, showed a ski with the carrying strap in conjunction with the rolling device). Secondly, a drawing could never be interpreted in isolation from the overall content of the application but only in that general context. The content of an application was defined not only by features mentioned or shown therein but also by their relationship to each other.

In **T 497/97** the board noted that, since drawings were often approximate and therefore unreliable, they could only be used in interpreting amended claims if the description did not contain a more precise indication of what was meant. Moreover, in the case at issue, the drawings showed only a preferred embodiment of the invention, which did not rule out the possibility of other embodiments covered by the claimed subject-matter. The board concluded that the contested wording, inserted in the characterising portion of claim 1, had been validly based on the description according to the application, ie that the wording had been inferable from its context without extending its meaning.

In **T 748/91** the board reached the conclusion that size ratios could be inferred even from a **schematic drawing** as long as the delineation provided the relevant skilled person with discernible and reproducible technical teaching. In the board's view, schematic drawings depicted all the essential features.

However, a figure which served only to give a schematic explanation of the principle of the subject-matter of the patent and not to represent it in every detail did not allow the sure conclusion that the disclosed teaching purposively excluded a feature not represented. A "negative" feature of this sort (in this case: "with no internal fittings") could not subsequently be incorporated into the claim (**T 170/87**, OJ 1989, 441). Regarding the absence of a feature in a figure which served only to give a schematic explanation of the principle of the invention, see also **T 264/99**, in which the board found the circumstances to be different from those in **T 170/87**.

Likewise, in **T 906/97** the board held that the parent application as filed failed to disclose unambiguously the position of a door. The only indication of this position could be found in some figures, and in the board's view there was no suggestion whatsoever in the description itself that this detail of the schematic representation was actually meant to correspond to a technical feature of the apparatus shown in the figures, rather than being merely an expression of the draughtsman's artistic freedom.

1.4 Cross-references

In **T 6/84** (OJ 1985, 238) the subject-matter of the application was a chemical process solely characterised in that the catalyst was synthetic offretite having a silica/alumina mole ratio of 5 to 10. For the definition of synthetic offretite the description referred to a Canadian patent specification in which the offretite used was defined as aluminosilicate having the given mole ratios for the oxides and a characteristic X-ray powder diffraction pattern. The board took the view that structural features of a means for performing a chemical process (here the catalyst "offretite"), which were not mentioned in the application documents themselves but in a document (here a Canadian patent specification) to which they referred, could be incorporated into a patent claim if they unequivocally formed part of the invention for which protection was sought (see **T 590/94**). However, it was not permissible to single out a particular one of their number (here a silica/alumina ratio) in the absence of evidence that this feature alone was a sufficient characterisation. It was instead necessary to recite fully the other essential components of the structure and the diffraction pattern figures which belonged together, as originally disclosed and defined in that document.

In **T 6/84** it was clear having regard to the facts that the further characterising parameters of synthetic offretite which were included in the main claim by way of amendment were indeed features which unequivocally formed part of the invention for which protection was already sought, because the use of synthetic offretite as a catalyst was already the only characterising feature in the claim as originally filed, and the features which were added to that claim simply defined such synthetic offretite better.

In **T 689/90** (OJ 1993, 616), however, the description of the invention as originally filed did not in any way suggest that the "further details" of a certain feature to be found in a document D1 referred to and now to be included in the main claim were intended to identify features of the invention for which protection might be sought or that such features implicitly clearly belonged to the description of the invention. The board decided that features disclosed only in a cross-referenced document which was identified in the description as filed were *prima facie* not within "the content of the application as filed". Only under particular conditions would

adding them to a claim not be an infringement of Art. 123(2) EPC - namely if the description of the invention as filed left the skilled reader in no doubt that protection was sought for those features, that they helped achieve the invention's technical aim and thus formed part of the solution to the technical problem underlying the invention claimed, that they implicitly clearly belonged to the description of the invention contained in the application as filed and thus to the content of the application as filed, and that they were precisely defined and identifiable within the total technical information contained in the reference document. In the case at issue these requirements were not fulfilled.

1.5 Errors in the disclosure

1.5.1 Calculation errors

In **T 13/83** (OJ 1984, 428) the board held that R. 88 EPC did not apply to a non-obvious correction of an error in the description or claims which resulted from an erroneous technical calculation. A correction of such an error was allowable under Art. 123(2) EPC if the amendment would be regarded by the skilled reader as clearly implied by the disclosure of the application as filed. If more than one arithmetical possibility of correction could be envisaged, the correction chosen had to be the one which the application as a whole clearly implied.

1.5.2 Incorrect structural formula

In **T 552/91** (OJ 1995, 100) the question arose - apparently for the first time - as to whether and in what form protection could be obtained for groups of chemical substances and individual compounds whose originally disclosed structural formula proved incorrect. The applicant's main request was aimed at securing such protection by a further substance claim for the group of compounds with the structural formula subsequently found to be correct. This request was refused on the grounds that it would violate Art. 123(2) EPC. The board defined "content" within the meaning of Art. 123(2) EPC as "the entire technical disclosure derived by a skilled person from the application". Thus it was not enough to prove that as a result of amendments to the original patent application nothing other than the originally disclosed subject-matter was claimed; what was more important was that technically relevant information which the skilled person could not derive from the original documents was not thereby added to the application. In this case, the subsequently amended general formula gave the skilled person for the first time crucial information about the true chemical structure of the group of substances. This led to conclusions regarding properties that could be put to use. The information added to the application through the amendment of the general formula and relating to the true composition of the group of substances could not have been obtained from the application as originally filed.

1.5.3 Amendment based on errors

In **T 740/91** the board allowed a change in the upper limit of the amount of epoxy compound present on a yarn from 5.0 % by weight to 0.6 %. This amendment conferred both novelty and inventive step on the claimed subject-matter. The value of 0.6 % was explicitly disclosed in example IV. However, the patentee conceded that this figure had been inserted in error in

place of the true figure of 0.49 %.

The board concluded that the fact that the figure was wrong did not alter the fact that it was actually and credibly disclosed. It could thus be relied on as the basis for the new upper limit. This interpretation of Art. 123(2) EPC was consistent with its underlying intention, which was to protect the public from being faced at a later stage with claims which were wider in their scope than what had been disclosed in the application as filed, and published for the information of the public, including the applicant's competitors. In this case, any such competitor who had read the application as first published had formed the view that the originally claimed range of 0.1 to 5 % was too wide in the light of the prior art, and had thought that the broad claim could not validly be sustained. He would have seen at once that the highest figure for the cured epoxy resin given in any example was 0.6 %, as clearly disclosed in example IV, and therefore could not have been taken by surprise if the upper limit of 5 % were later to be reduced to 0.6 %. The fact that the figure was wrong would be unknown to competitors, and therefore could not influence their judgment.

1.5.4 Elimination of contradictions

In **T 172/82** (OJ 1983, 493) the deletion of a feature in a claim was considered admissible because the sole purpose of such deletion was to clarify and/or resolve an inconsistency. And in **T 271/84** (OJ 1987, 405) it was stated that an amendment to a claim to clarify an inconsistency did not contravene Art. 123(2) or (3) EPC if the amended claim had the same meaning as the unamended claim, on its true construction in the context of the specification.

In **T 758/92** the board allowed the deletion of a feature because it was clearly inconsistent with the teaching disclosed in the application as filed, and there was a clear basis in the original disclosure for its deletion. A skilled reader of the original application documents would have realised that the feature to be deleted was erroneously introduced in the claim because the resulting definition was contradictory to the functioning of the described embodiment of the invention.

In case **T 60/90** the applicant had deleted the lower limit of a temperature range in order to eliminate an inconsistency between the claims and the examples. Resolving this inconsistency was found unobjectionable under Art. 123(2) EPC. The board held that, (1) the feature in question was not explained as essential in the disclosure (it was originally a preferred embodiment), (2) it was not, as such, essential for the function of the invention (the examples used a lower temperature - the source of the contradiction), and (3) its removal required no real modification of other features to compensate for the change.

In **T 609/95** the board took the position that where a drafting defect or inconsistency in an application would be evident to a reader skilled in the art, the person to whom the application is addressed, it is reasonable to suppose that he would, in the light of the content of the application, attempt to formulate a notional amendment which would enable him to make sense of what he reads, and to the extent that the amendment might be said to leap to the mind of the reader, although perhaps only after close study of the document, it can be regarded as implicit in the application and would not contravene Art. 123(2) EPC, if effected in practice (see also **T 887/97** for such amendment during opposition appeal proceedings).

1.6 Subsequent addition of details

1.6.1 Amendments in the description of the prior art

In **T 11/82** (OJ 1983, 479) it was pointed out that the mere addition to the description of a reference to prior art could not reasonably be interpreted as the addition of "subject-matter", contrary to Art. 123(2) EPC. Whether it did so would clearly depend on the actual language used and the circumstances of the case.

In **T 211/83** the board even considered it essential that details of the way a component of the invention worked, which could only be inferred from previously published advertising literature referred to in the description, be included in the description since they were of significance for the invention.

In **T 450/97** (OJ 1999, 67) the board confirmed that the mere addition of a reference to prior art did not contravene Art. 123(2) EPC. It added that after limitation of the claims, also at the opposition stage, a document which subsequently proved not only to be the closest state of the art, but also to be essential for understanding the invention in the meaning of R. 27(1)(b) EPC was to be introduced in the amended description.

In **T 889/93** the appellant/applicant explained that the closest prior art was shown in two figures of the contested application. In his reply to the board's objection of obviousness he submitted that these figures did not show the state-of-the-art device correctly as they were misleadingly oversimplified. The board allowed originally filed drawings to be replaced by better ones since this only removed an inaccuracy in the representation of the state of the art and did not affect the disclosure of the invention per se. **T 1039/93** found along similar lines. In the case at issue, certain figures of the application as filed had been erroneously labelled as prior art while in fact representing in-house technical knowledge of the appellant that had not been made available to the public. The board did not object to the deletion of the labels "prior art" from the relevant figures since such deletion neither infringed Art. 123(2) EPC nor affected the disclosure of the state of the art; on the contrary such amendment was necessary to avoid giving an inaccurate representation of the state of the art. After the amendment the description correctly indicated the prior art as required by R. 27(1)(b) EPC.

Equally, an amended claim did not contain subject-matter which extended beyond the content of the application as filed if the preamble to the claim had been amended by substituting an appropriate more general term, which was apt to define a feature common to both the closest prior art described in the application as filed and the invention which was the subject of the application, for a specific term which was not apt to define that feature of the prior art (**T 52/82**, OJ 1983, 416).

1.6.2 Subsequent addition of effects

In **T 11/82** (OJ 1983, 479) it was stated that it was not inevitable that the addition of a discussion of the advantages of the invention with reference to the prior art would constitute a contravention of Art. 123(2) EPC. In **T 37/82** (OJ 1984, 71), for example, a technical feature was clearly disclosed in the original application but its effect was not mentioned or not

mentioned fully. It could however be deduced from the original application on the basis of normal expert considerations.

In the Guidelines, Part C-VI, 5.7 and 5.7a, it is pointed out that amendment by the introduction of further examples and statements of effects or advantages of the invention not mentioned previously should always be looked at very carefully in the light of general considerations. Under certain circumstances, later filed examples or new effects, even if not allowed into the application, may nevertheless be taken into account by the examiner as evidence in support of the patentability of the claimed invention.

1.6.3 Disclaimer

In **T 898/91** the board held that the purpose of a disclaimer was to re-establish the novelty of a claim over the teaching of a prior art document without introducing new subject matter, so that a precise basis for what was disclaimed had to exist either in the original application or in the prior art document.

In **T 982/94**, claim 1 was amended during appeal procedure by changing the original lower limit of 40° for the twist angle to a new lower limit of 60°, which was not explicitly disclosed in the original application documents. This modification which amounted to disclaiming the values between 40° and 60° from the originally claimed range for the twist angle, was introduced in order to overcome the novelty objection based on the contents of document D1 in which the limit of 60° was explicitly disclosed as the upper limit of the preferred range of between 20° and 60° for the twist angle. For this reason among others the board was convinced that the disclaimer introduced into claim 1 as amended was adequately supported by the disclosure of document D1, and the amendment therefore complied with the requirements of Art. 123(2) EPC.

However, in **T 898/91** the board held that if the appellants' intention were to re-establish novelty over document (1), then it should be noted that the newly introduced expression "less than 25 wt. %" would not achieve this goal. This was because in document (1) the range 25 to 65 % by weight was merely given as an example of "low fat". There seemed thus no reason why the skilled person would not regard something below but close to 25 wt. % as also falling within the teaching of document (1), so that the feature below 25 wt. % could not be regarded as a disclaimer of any overlap with any precise range required by document (1). Claim 1 was thus objectionable under the terms of Art. 123(2) EPC.

In **T 863/96** (see also **T 43/99**) the board referred to the case law of the Boards of Appeal according to which it would be allowable under Art. 123(2) EPC to formulate a disclaimer which is precisely defined and limited to the prior art disclosure, provided this disclosure is an accidental novelty-destroying disclosure. It clearly appeared that the disclaimer to be formulated on the basis of this disclosure was only allowable if the cited document containing the said disclosure had no relevance for any further examination of the claimed invention and it must then disappear from the prior art field to be taken into consideration. The board referred to **T 4/80** (OJ 1982, 149), and **T 170/87** (OJ 1989, 441) where the disclaimer was not allowed because the subject-matter to be disclaimed was considered relevant to the assessment of inventive step (see also **T 596/96**).

III.A.1. Content of the application as originally filed

In **T 1071/97** board pointed out that excluding protection for part of the subject-matter of the claimed invention as covered by the application as filed or the patent as granted by disclaiming a certain anticipation in prior art which was not referred to in the originally filed documents was acceptable under the terms of Art. 123(2) EPC only if the following conditions were met: (i) the subject-matter disclaimed had to be precisely defined and strictly limited to the actual scope of the anticipation; and (ii) said anticipation had to be a so-called "chance anticipation", which meant that it would be regarded as accidentally falling within the terms of the claims of the application or the patent in question.

Condition (ii) specifically referred to cases where what was disclosed in the prior document could fall within the wording of the claims of the application or the patent to be assessed for novelty without there being a common or related technical field, or a common technical problem or solution. In other words, the prior document had to form part of an entirely remote and unrelated state of the art which the skilled person, faced with the assessment of inventive step, would normally never take into consideration. In each case, a particularly careful comparison was 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.

The board stated that since the state of the art in the present case was highly relevant to the subject-matter claimed in the patent in suit, condition (ii) was clearly not met. Accordingly, the disclaimer was not allowable under Art. 123(2) EPC and, consequently, the first auxiliary request as a whole was not acceptable (see also **T 608/96**, **T 917/94**, **T 159/95**, **T 13/97**, **T 645/95**).

In **T 596/96** the board came to the conclusion that the first condition for a disclaimer to be admissible was that the prior art document must be **indisputably novelty-destroying**. In the present case, no novelty objection was raised on the basis of the documents cited by the appellant in support of the disclaimer.

As explained in **T 426/94**, the incorporation into a disclaimer of features not disclosed in either the contested patent or the originally filed documents, in order to exclude any accidental novelty-destroying prior description of parts of the claimed subject-matter, was, according to current board of appeal practice, not contrary to Art. 123(2) EPC. The disclaimer had, however, to adhere as closely as possible to the wording of the disclosure of the novelty-destroying document.

In **T 893/96** the board judged that the originally allowed disclaimer on which the claim was maintained according to the decision under appeal was not allowable, because it was broader than the prior art it purported to overcome and so was in breach of the provisions of Art. 123(2) EPC (see also **T 915/95**).

In **T 65/97** the appellant introduced a disclaimer to exclude the disclosure of prior art document D1, thereby trying to make the claimed subject-matter novel. However, the disclaimer was not allowable because it did not disclaim all of what was disclosed by D1.

In **T 541/97** the invention related to a filter for a smoking article comprising a water disintegrative paper. The parameter of the moisture disintegration index (MDI) was the only

characterising feature used to define the invention. After examination the board concluded that this MDI parameter and the associated test were not publicly known at the date of priority and/or filing. The board further decided that the test for determining this unusual parameter, which had to be sufficiently defined to produce an acceptably accurate and repeatable result, was also not sufficiently defined in the patent application as filed. In particular, it was important to use the correct type of measuring cylinder for the MDI test in order to arrive at the correct value for the parameter.

The appellant specified the type of measuring cylinder to be used by amending the claim and the description. He saw this as a disclaimer, ie excluding all other cylinders from use.

The board however found that the effect of changing the type of cylinder was to change considerably the value of MDI measured with it. Thus the type of cylinder used played an essential role in determining the scope of protection.

The board held that specifying the type of cylinder after filing the application was not a disclaimer in the accepted sense: it did not exclude protection for part of the subject-matter otherwise covered by the claim, nor did it make the claim novel over cited prior art or limit the claim to one of the previously disclosed alternatives. Instead, it chose something which had never been specifically mentioned before, thereby extending the subject-matter of the originally filed application. The applicant furthermore relied on the argument that legal certainty was increased by the amendment. The board did not agree. A competitor might have obtained different test results by using a measuring cylinder other than the one now mentioned in the claim.

The amendment, which provided a technical contribution to the subject-matter of the claimed invention, would have given an unwarranted advantage to the appellant which was contrary to the purpose of Art. 123(2) EPC, as explained in **G 1/93**.

In the recent decision **T 323/97** (OJ 2002, ***) the board held that disclaimers not based upon application as filed are not admissible.

2. Divisional applications

European divisional applications may only be filed in respect of subject-matter which does not extend beyond the content of the parent application (Art. 76(1) EPC, second sentence). All features disclosed in the divisional application must have been indicated in the description, claims or drawings of the parent application as filed.

In decisions **T 527/88** and **T 514/88** (OJ 1992, 570), the boards extended the principles set out in rulings on Art. 123(2) EPC to the relationship between divisional and parent applications. The subject-matter of the amended application or patent (in this case the divisional application) had to be directly and unambiguously derivable from, and consistent with, the original disclosure (in this case the parent application). Following the idea expressed in **T 873/94** (OJ 1997, 456), the board in **T 1221/97** stated that a divisional application has to meet - inter alia - both the requirements of Art. 76(1) EPC and those of Art. 123(2) EPC: it has neither to extend beyond the parent application nor be amended after filing in such a

way that it contains subject-matter which extends beyond the content of the divisional application as filed.

In **T 276/97** the arguments of the appeal may be summarised as follows: given that the terms of the French version of Art. 76(1) EPC, second sentence, are different from those of Art. 123(2) EPC, it is wrong to follow the EPO case law, according to which the interpretation of Art. 123(2) EPC is applicable to Art. 76(1) EPC as well. The appellant concluded that, by basing its ruling on the German and English wordings, the examining division had incorrectly interpreted and applied Art. 76(1) EPC.

The board decided that the purpose of Art. 76(1) EPC, second sentence, was the same as the purpose of Art. 123(2) EPC, ie to guarantee the legal certainty of third parties taking the content of the parent application as their basis and to create a fair balance between the interests of applicants and other parties (see **G 1/93**, OJ 1994, 541, points 8, 9 and 16). Moreover, the case law of the boards of appeal confirms that Art. 76(1) EPC is to be equated with Art. 123(2) EPC. The term "éléments" in the French wording of Art. 76(1) EPC does not justify a different interpretation of the terms "Gegenstand" and "subject-matter" respectively in the German and English wordings of Art. 76(1) and 123(2) EPC. The board also confirmed that the French wording of Art. 76(1) EPC translates the same intentions as the German and English versions of the article, ie to prohibit extension of the content of the parent application by the introduction of new subject-matter in the divisional filing, just as by any amendment subsequent to the date of filing of the parent application.

In **T 289/95** the board held that the question of whether or not a claim in a patent deriving from a divisional application "covers" or "embraces" something which was not specifically disclosed in the parent application was not the proper standard of comparison for determining whether there had been an inadmissible extension of subject-matter. The board stated that what was required was an analysis of whether the subject-matter of the contested patent was directly and unambiguously derivable from, and consistent with, the disclosure in the parent application.

T 176/90 was based on the principle that the parent application should disclose the invention of the divisional application in a manner sufficiently clear and complete for it to be carried out by the skilled person. For an invention relating to a generic class of chemical compounds this required the disclosure of the structure of the class, usually by means of a general formula, and an indication of a method of preparation. In the opinion of the department of first instance, the ethers and esters referred to in the divisional application could not be derived from the parent application since the latter only disclosed the corresponding alcohols. The board took the view that although the parent application described alcohols only as individual compounds, the teaching was not restricted only to this. Rather, it also encompassed ethers and esters of the alcohols specifically defined by the general formula. Since the specific alcohols referred to in the parent application fell within the definition of the general formula and served to illustrate the general formula, the skilled person could infer from the total disclosure of the parent application the generic ethers and esters of these individual alcohols.

In **T 441/92** a divisional application was filed with a description which was substantially identical to that of the parent application. After an amendment of the claims the divisional

application comprised the same subject-matter as the parent application which in the meantime had lapsed irrevocably (thus the question of double patenting did not arise).

The board stated that it was a generally accepted principle of patent law that, once a divisional application had been validly filed, it became separate and independent from the parent application. Thus, once the conditions of Art. 76(1) EPC had been met, the divisional application was to be examined as an application quite separate from the parent application and had itself to comply independently with all the various requirements of the EPC.

A divisional application therefore had to meet both the requirements of Art. 76(1) EPC and those of Art. 123(2) EPC: it had neither to extend beyond the content of the parent application as filed nor be amended after filing in such a way that it contained subject-matter which extended beyond the content of the divisional application as filed.

In this case the board found that the claims now contained in the divisional application did not introduce subject-matter beyond the content of the parent application and thus did not contravene Art. 76(1) EPC. Nor was Art. 123(2) EPC contravened, since all the claims were directly and unambiguously derivable from the description of the divisional application as filed.

Equally no objection arose from the fact that the divisional application as originally filed claimed a different invention from that specified in the amended claims. While the content of an application must not be extended after filing, the protection sought by the claims might be extended beyond that sought in the claims as originally filed as long as the application was pending; in this respect, there was no distinction between a normal application and a divisional application.

Furthermore, the subject-matter of the claims of the parent application could not be considered to have been abandoned because the parent application in this case had lapsed. The board found that the lapse of the parent application could not have the effect of reducing the content of a previously filed divisional application.

In **T 542/94** the examining division refused a divisional application because its subject-matter extended beyond the parent application, but on the basis of Art. 123(2) EPC when it should have been on the basis of Art. 76(1) EPC. The board noted that the requirement for admissibility of the claims of a divisional application under Art. 76(1) EPC corresponded to that set out in Art. 123(2) EPC (see also **T 441/92**). Since the examining division's arguments were essentially based on a comparison between the subject-matter of the parent application and that of claim 1 of the divisional application, its finding was in fact based on Art. 76(1) EPC. Hence, the imprecise ground for refusal given in the decision under appeal did not put the appellant in a disadvantageous position and there was therefore no case for reimbursement of the appeal fee under R. 67 EPC .

In **T 211/95** the examining division had refused a divisional application on the ground that a set of features from the original claim 1 of the parent application was entirely missing from claim 1 of the divisional application. This omission was said to violate the provisions of Art. 76(1) EPC. The board was unable to accept this. There were two technically unconnected

teachings which could be claimed for separately. The skilled person would clearly see that the set of features according to the subject-matter claimed in the parent application was not essential to the subject-matter claimed in the divisional application. The subject-matter of the divisional application was directly and unambiguously disclosed in the parent application.

In **T 58/86** it was decided that the independent claims of a divisional application exceeded in an impermissible way the disclosed content of the original application, since in each of them an essential feature of the relevant subject-matter of the original application was omitted; reinstating this feature would have led to a subject-matter that was already protected in the original application (double patenting).

3. "Tests" for the allowability of an amendment

3.1 The "novelty test"

In **T 201/83** (OJ 1984, 481) it was stated that the test for compliance with Art. 123(2) EPC was basically a novelty test, ie no new subject-matter may be generated by the amendment. This was approved in **T 136/88**. **T 17/86** (OJ 1989, 297, Corr. 415) added that novelty could be found in a limitation, the addition to a claim of a further feature, or even in the absence of one of the elements of a device. The novelty test was incorporated in the Guidelines, Part C-VI, 5.4.

In **T 416/86** (OJ 1989, 308) it was held that the fact that a technical means (in this case an aperture of a special design) was known did not take away the novelty of its equivalents (in this case, apertures of a different design producing the same effect as the former) even if the equivalents were themselves well known. It followed that the equivalents of a disclosed technical means had to be considered new and therefore not disclosed if they were not mentioned in the original documents. In accordance with these principles, the board decided that the replacement of a specific feature disclosed in the invention by a broad general statement was to be considered as an inadmissible amendment under Art. 123(2) EPC when this general statement implicitly introduced for the first time specific features other than that originally disclosed. Therefore, the substitution in the claim of a structurally defined element of that claim by its known function (or disclosed function) was considered contrary to Art. 123(2) EPC.

However, in decision **T 873/94** (OJ 1997, 456) the board pointed out that where a proposal for amending an application involved the addition of a limiting feature to a claim, applying a "novelty test" was not appropriate for determining whether or not the amendment complied with Art. 123(2) EPC. Following **G 1/93**, the board pointed out that the underlying idea of Art. 123(2) EPC was clearly that an applicant should not be allowed to improve his position by adding subject-matter not disclosed in the application as filed, which would give him an unwarranted advantage and could be damaging to the legal security of third parties relying on the content of the original application. In the light of these considerations the addition to a claim before grant of an undisclosed limiting feature might or might not violate Art. 123(2) EPC, depending on the circumstances.

3.2 The "is it essential" test

The second test developed by the boards of appeal for the allowability of an amendment, having regard to Art. 123(2) EPC concerns the deletion of a feature. In **T 66/85** (OJ 1989, 167) it was pointed out that if a technical feature was deleted from a claim in order not to exclude from protection certain embodiments of the invention, the broadening of the claim did not contravene Art. 123(2) EPC as long as there was a basis for a claim lacking this feature in the application as originally filed. It was immaterial whether or not the feature in question was relevant to the inventive concept of the claimed subject-matter (see also **T 228/98**, Reasons 3.4.5).

T 133/85 (OJ 1988, 441) concerned a case where a feature was described as an essential feature of the invention but was not contained in the claim. The claim was therefore not supported by the description (Art. 84 EPC). An **amendment to the description** to provide support for the claim was, however, not allowable under Art. 123(2) EPC, because the amended description would contain subject-matter which extended beyond the content of the application as filed - namely information that such feature was not an essential feature of the invention.

On the other hand, in **T 260/85** (OJ 1989, 105) it was stated that it was not permissible to **delete** from an **independent claim** a feature which the application as originally filed consistently presented as being an **essential feature** of the invention, since this would constitute a breach of Art. 123(2) EPC. **T 496/90**, **T 189/94**, **T 628/91** and, more recently, regarding deletion of the feature "substantially pure", **T 728/98** (OJ 2001, 319), confirmed this case law. In **T 628/91**, however, the disclosure was such that a structural feature could be replaced by a functional one, firstly because it was not disclosed as essential, secondly because its function was described.

In **T 415/91**, the board refused to allow the deletion of the feature "three-phase" alternating current. It argued that the low and high AC voltages were consistently referred to in the description and claims as being three-phase: the expression "three-phase" appeared about 200 times in the application as originally filed and no other number of phases was mentioned at all. The skilled person reading the application as originally filed would not necessarily have regarded the numerous references to "three-phase" as being purely by way of examples. Although it was possible that upon reflection, and using his imagination, it might occur to him that it was not essential to use three phases, this would be his own idea, resulting from his own thinking. It was not part of the content of the application as originally filed. In **T 236/95** the board examined whether, considering the problem derivable from the original description, three deleted features were represented as essential features of the invention. If the problem could not be solved without the features concerned, they could not be considered unimportant.

That the original disclosure is the determining factor is also clear from **T 331/87** (OJ 1991, 22), in which deletion of a non-essential feature was allowed: the replacement or removal of a feature from a claim may not be in breach of Art. 123(2) EPC if the skilled person would directly and unambiguously recognise that (1) the feature was not explained as essential in the disclosure, (2) it was not, as such, indispensable for the function of the invention in the

light of the technical problem it served to solve, and (3) the replacement or removal required no real modification of other features to compensate for the change (see also **T 60/90** in chapter III.A.1.5.4).

Applying the above mentioned criteria in **T 396/95**, the board considered that whereas it was not expressly mentioned that the deleted feature ("carbonation") was essential for the invention this followed implicitly from the whole presentation of the invention. This feature was seen by the board to be indispensable for the function of the invention in the light of the technical problem it served to solve. Indeed the skilled person would not have regarded the carbonation feature as indispensable for the function of the invention, if the invention concerned the obtaining of chilled beverages and the problem underlying the invention consisted only of how to improve the cooling of the water in order to provide cooled beverages. But in the present case the application as originally filed related to "a water carbonator system" and the problem underlying the invention also comprised the improvement of gas/liquid mixing. In this case, the skilled person would regard the carbonation feature as indispensable for solving the problem underlying the invention.

In **T 374/93** the opponent argued before the board that the amount of polymer to be added to the suspension as defined in claim 1 of the original application was an essential feature, and that the deletion of this feature was not allowable under Art. 123(2) EPC. The board did not agree, holding that the original application as a whole unambiguously taught that the amount of cationic polymer to be added to the suspension depended on various parameters and could easily be experimentally determined. In the board's judgment, a skilled person would therefore interpret the relevant passage, in the light of the original specification as a whole, as an instruction to facilitate the finding of the optimum amount of cationic polymer, or as an advantageous embodiment of the originally disclosed invention. In view of these considerations, the deleted feature of the originally filed claim 1, suggesting the need to raise in steps the amount of polymer to be added if the amount of cationic binder were reduced from a value just above 0.5% to a value just below this value, appeared to be inconsistent with the teaching of the original application. In any case, in the board's view, the skilled reader would not immediately and unambiguously recognise from the passage containing several relative terms and expressions such as "in some instances", "eg", "normally" and "usually", that the feature as deleted from the original claim 1 was a mandatory feature.

In **T 784/97** the patent proprietor alleged that a prior art document would have made the skilled person aware that the disputed feature was not essential. The board held that whether or not a feature of an independent claim had to be seen as "essential" could not be a question of the prior art disclosure. Rather, what had to be decided was what a skilled person was taught by the originally filed documents. In the present case, a skilled person having considered the originally filed documents was aware that the particle size was part of the alleged invention, so that this feature could not be omitted from an independent claim at a later stage without contravening the requirements of Art. 123(2) EPC and Art. 100(c) EPC.

Any attempt to interpret Art. 123(2) EPC such that the introduction into a claim of features previously described as non-essential would not be permissible, must fail. The board based this statement in **T 583/93** (OJ 1996, 496) on the consideration that the EPC contained no requirement that forbade the redefinition of an invention provided that Art. 123(2) and (3) EPC

were complied with. Such a redefinition was often necessary in order to take into account prior art not known to the applicant at the priority date. It was therefore possible that features described as optional at the priority date later became essential in the sense that they were necessary to delimit the invention from the prior art. The introduction of such features was permissible provided that, first, the application as originally filed contained an adequate basis for such limitations and, second, the resulting combination of features was still in line with the teaching of the application as originally filed.

3.3 Deducibility of amendments from the application as filed

In a number of recent decisions boards viewed with reservation the "novelty test" for the admissibility of amendments to a patent application. **T 133/85** (OJ 1988, 441) pointed out that care was necessary when applying the law relating to novelty to questions which arose in relation to Art. 123(2) EPC. In **T 177/86** the novelty test was described as "not very useful" for examining the admissibility of broadening a claim.

Decision **T 194/84** (OJ 1990, 59) related to amendments leading to the generalisation of the subject-matter of an application or to the omission of a feature (in this instance, the use in an electrode of a storage battery cell of cellulose fibres in general instead of natural cellulose fibres). The patentee had taken the view that the amendment was admissible because the original application could properly be cited against the novelty of a more generic claim to cellulose fibres. The board took the view that this approach was based on a misapplication of the novelty test. The test for additional subject-matter corresponded to the test for novelty only in so far as both required assessment of whether or not information was directly and unambiguously derivable from that previously presented in the originally filed application or in a prior document respectively. An amendment was not allowable if the resulting change in content of the application, in other words the subject-matter generated by the amendment, was novel when compared with the content of the original application or, looked at another way, if the said change in content would be novelty-destroying for a hypothetical future claim when the original content would not be. It was important that it was the change in content which was tested, ie the amended content minus the original content, so that the test was applicable to amendment by generalisation or omission of a feature.

In **T 514/88** (OJ 1992, 570) the board took the view that the two tests in relation to the question of broadening of claims before grant by abandoning a feature, ie the test for essentiality (or inessentiality) on the one hand and the novelty test on the other, were not mutually contradictory but represented the same principle. In both cases the relevant question was whether or not the amendment was consistent with the original disclosure. This meant direct and unambiguous derivability from and no contradiction of the totality of the original disclosure. **T 527/88** and **T 685/90** followed the same reasoning.

T 118/89 took a reserved attitude to the novelty test, but at the same time emphasised the importance of the above mentioned key question, in stating that the allowability of amendments during the grant procedure could be determined without reference to the state of the art simply by comparing the protection sought on the basis of the current claims with the disclosure in the application as filed. There was therefore no objective need to carry out new or modified novelty tests. The test for novelty was similar to that for allowability of

III.A.3. "Tests" for the allowability of an amendment

amendments under Art. 123(2) EPC only in so far as the former also involved a direct comparison, in this case between the claims and the disclosure in a document or other evidence possibly prejudicial to novelty, ie the state of the art.

It is also clear from **T 288/92** and **T 187/91** (OJ 1994, 572) that the decisive question is whether the amendment can be directly and unambiguously deduced from the application documents as filed. In **T 288/92** the appellant/applicant contended that the amendment resulted in a limitation of the original claim. The board rejected this argument on the grounds that the expression "subject-matter which extends beyond the content of the application as filed" in Art. 123(2) EPC prohibited the introduction of any technical information which a skilled person would not have objectively derived from the application as filed, so that the examination of the allowability of an amendment according to Art. 123(2) EPC was directed to the process of "derivation" (see also **T 383/88**), as distinct from a simple comparison of the scopes of amended and unamended subject-matters. In the view of the board this provided **a definitive method** for deciding the allowability of an amendment. Any other "test", such as the "novelty test", necessarily posed hypothetical questions. On the facts of the case the board held that it was not permissible to amend a generic formula defining a class of chemical compounds by restricting an originally disclosed generic definition of a substituent to a specific (individual) one which was arbitrarily selected from chemical entities, such as in the examples, without some support for such restriction in the general part of the description (see also **T 859/94**).

In **T 187/91** the appellant requested that a patent on a fibre optic amplifier be granted. The claims in the application as filed referred to "a plurality of pump light sources", ie **two** or more light sources; the amended claims referred to "a pump light source" and, thus, sought protection for a fibre optic amplifier including **one** or more light sources. The board conceded that there was clearly a close conceptual correlation between the assessment of novelty and the assessment of what was an allowable amendment under Art. 123(2) EPC. It further explained, however, that two considerations which underlay Art. 123(2) EPC were different from those that underlay Art. 54 EPC: firstly, a reader of an application published pursuant to Art. 93(1) EPC after 18 months would be informed of the maximum extent of its subject-matter and therefore its maximum content some time before the text of the application including the claims was finalised, having regard to the drawing up of the European search report and the subsequent examination of the application. Secondly, the relationship between the claims and content of the European patent application was determined by the idea that, after appropriate amendment if necessary, the granted claims should give a fair protection for the inventive subject-matter contained in the application as filed.

The board found that a skilled reader of the application as filed would seriously contemplate the use of only one light source when carrying out the described invention; there was nothing in the application as filed or in his common general knowledge which would cause the skilled person to exclude the possibility of using only one light source. Additionally, on a careful and analytical reading of the whole content of the application as filed, there was no reason to regard the use of a plurality of light sources as essential to the invention in order to achieve its stated aims. On the contrary, the proper interpretation of the content of the application as filed was that it included as one possible practical variation of the preferred embodiment of the invention a fibre optic amplifier having only one light source.

In several decisions, the boards were required to give an opinion on interpreting the term "clearly and unambiguously derivable". These decisions also show how this criterion is applied in practice.

T 367/92 gives an example of an amendment rejected under Art. 123(2) EPC because it contained a specific term which, in the board's view, could not be considered to be clearly and unambiguously derivable from the originally disclosed generic term. In this case the issue of admissibility under said article boiled down to the question whether the generic term "polyester" could be equated with the specific term "polyethylene terephthalate". The sole document added by the appellant/patent proprietor in support of this interpretation proved only that polyethylene terephthalate was a polyester (which was never under discussion), but did not show that "polyester" could be interpreted as implicitly meaning "polyethylene terephthalate".

In **T 925/98** the originally filed documents of the patent in suit disclosed a general range of 30% to 60% and a preferred range of 35% to 50%. Referring to **T 2/81**, OJ 1982, 394, point 3; **T 201/83**, OJ 1984, 481, **T 53/82**, **T 571/89**, **T 656/92**, **T 522/96**, **T 947/96** the board stated that in the case of a disclosure of both a general and a preferred range a combination of the preferred disclosed narrower range and one of the part-ranges lying within the disclosed overall range on either side of the narrower range was unequivocally derivable from the original disclosure of the patent in suit. Thus, claiming a range from 30-50 % did not contravene Art. 123(2) EPC. In the present case, further, graphs indicated that the claimed range was in fact the most efficient one.

In **T 823/96**, the question whether or not a composition containing zero percent of a UV absorber was disclosed in the application as originally filed had, in the board's judgment, to take account of the whole content thereof and could not solely be based on the isolated parts of the description relied upon by the appellant. The board also observed that the term "implicit disclosure" should not be construed to mean matter that does not belong to the content of the technical information provided by a document but may be rendered obvious on the basis of that content. In the board's judgment, the term "implicit disclosure" relates solely to matter which is not explicitly mentioned, but is a clear and unambiguous consequence of what is explicitly mentioned. Therefore, whilst common general knowledge must be taken into account in deciding what is clearly and unambiguously implied by the explicit disclosure of a document, the question of what may be rendered obvious by that disclosure in the light of common general knowledge is not relevant to the assessment of what is implied by the disclosure of that document. On the contrary, these two questions must be strictly separated. The board therefore did not agree with the appellant's submission that the decision under appeal was based on an underestimation of the common general knowledge.

In **T 329/99** the board stated that a clear distinction must be made between the questions of whether a particular embodiment was disclosed by an application, be it explicitly or implicitly, or whether this embodiment was merely rendered obvious by the application's disclosure: A particular technical embodiment might be rendered obvious on the basis of the content of an application as filed without, however, belonging to its explicit or implicit disclosure and, therefore, without serving as a valid basis for amendments complying with the requirements of Art. 123(2) EPC.

In **T 917/94** the board decided that the omission of a feature of a claim did not contravene Art. 123(2) EPC, if this feature was implicitly defined by two other features and, being therefore redundant, its omission created no subject-matter extending beyond that of the application as filed.

B. Article 123(3) EPC

Art. 123(3) EPC prohibits amendments to granted claims during opposition proceedings in such a way as to extend the protection conferred by a European patent.

1. General issues

In **T 325/95** the patent proprietor amended a granted claim by introducing limiting features disclosed only in the description. The appellant/opponent argued that claim 1 as granted did not actually afford any scope of protection whatsoever, because the claim was invalid, its subject-matter lacking an inventive step. Since the features added to claim 1 were not set out in any of the dependent claims as granted, the subject-matter now covered by amended claim 1 was not covered by any of the claims. Therefore, by introducing features disclosed only in the description the scope of the claims had been extended within the meaning of Art. 123(3) EPC.

The board pointed out that this argumentation was based on the assumption that the extent of protection referred to in Art. 123(3) EPC would depend not only on the actual wording of the claims, but also on their validity in view of the prior art. This assumption however was not supported by the explicit statement in Art. 69 EPC that "the extent of the protection conferred by a European patent ... shall be determined by the terms of the claims".

Appellant's submissions in effect also implied that claims amended in opposition proceedings should always have a counterpart in the set of claims as granted. This was not in line with the consistent case law of the EPO either. Attention was drawn for instance to decision **G 2/88** (OJ 1990, 93), which ruled that replacement of a granted claim to a compound or composition by a claim directed to a new use of the compound or composition was admissible under Art. 123(3) EPC.

In **T 1149/97** (OJ 2000,259) the board decided that, without opposition, issue of a decision to grant a European patent normally constituted a cut-off point for making amendments to the application documents in the European proceedings. If an opposition has been filed, cut-off effects due to the grant of a patent might be seen in the restrictions which R. 57a EPC, R. 87 EPC and Art. 123(3) EPC imposed on further amendment of the patent specification. Although Art. 123(3) EPC addressed only the claims of the European patent, amendments to the description and the drawings might also extend the protection conferred in accordance with Art. 69(1) EPC.

If, in view of Art. 84 and 69 EPC, the application documents were adapted to amended claims before grant, thereby deleting part of the subject-matter originally disclosed in order to avoid inconsistencies in the patent specification, as a rule subject-matter deleted for this reason

could not be reinserted either into the patent specification or into the claims as granted without infringing Art. 123(3) EPC. An analogous finding applied to subject-matter retained in the patent specification during such adaptation for reasons of comprehensibility, but indicated as not relating to the claimed invention.

In **T 666/97** the product claim of the auxiliary request no longer included a process feature which was included in the product claim as granted. In the board's view it followed from the fact that the subject-matter for which protection was claimed in the auxiliary request was a product that it could only be characterised by features manifest in/on the product itself. That meant that manipulations taking place during product manufacture but not resulting in product features were of no relevance to the definition of the claimed product and hence to the scope of protection of the claim. That was an unavoidable implication of the established case law of the boards of appeal, under which the subject-matter of a product-by-process claim derives its novelty not from new procedural steps but purely from structural features (see **T 205/83**, OJ 1985, 363).

Thus, to resolve the issue of compliance with the requirements of Art. 123(3) EPC, what had to be decided was whether the omitted product-by-process feature was technically significant for the definition of the claimed product, ie whether it was a product feature. The board found that in the present case the omitted feature was not a product feature. Thus the claim had not been extended within the meaning of Art. 123(3) EPC.

2. Generalisation of a feature

The board of appeal held in its decision **T 371/88** (OJ 1992, 157) that Art. 123(3) was not contravened if a restrictive term in a granted claim which in its strict literal sense did not embrace an embodiment set out in the description was replaced by a less restrictive term. The restrictive term should not, however, be so clear in its technical meaning in the given context that it could be used to determine the extent of protection without interpretation by reference to the description and drawings. Moreover, it had to be quite clear from the description and drawings and also from the examination procedure up to grant that the further embodiment belonged to the invention and that it was never intended to be excluded from the protection conferred by the patent.

In **T 795/95** the board did not share the appellant's view that deleting the feature "preferably polyvinyl or polyethylene" from the preamble of granted Claim 1 extended the protection conferred.

The formulation "preferably polyvinyl or polyethylene" had no bearing on the scope of protection, which was determined by the more general term "plastic" and not the specific preferred substances polyvinyl or polyethylene. Deleting a "preferred" feature did not extend the scope of protection if such feature was encompassed by an earlier and general one (in this case: "plastic") which determined the protection conferred.

3. Moving features from preamble to characterising portion

In **T 16/86** the board pointed out that it was the subject-matter of the claim as a whole which

embodied the invention. Therefore, in so far as a change in the position of a feature inside a claim did not alter its meaning, the extent of protection conferred remained unchanged and such an amendment contravened neither Art. 123(2) EPC nor Art. 123(3) EPC.

In **T 160/83** the board had no objection to the appellants' amendment of the characterising clause so as to include a feature which was previously in the preamble but not shown in the document representing the closest state of the art.

In **T 96/89** the board of appeal again allowed the transposition of features from the preamble of a claim to its characterising portion. This did not alter the subject-matter claimed, and thus did not extend the scope of protection. Nor was it in breach of Art. 123(3) EPC if terms were first generalised in the preamble, then trimmed back in the characterising portion to the subject-matter originally disclosed. R. 29(1) EPC required that claims be delimited against the nearest prior art; before the preamble to an independent claim could be drafted at all it was often necessary to select from two restrictive terms (the subject-matter claimed and the closest prior art) a general term covering both.

In **T 49/89** the subject-matter of granted claim 1 had been limited during opposition proceedings to a special embodiment according to granted dependent claim 2. The board of appeal held that the protection had not been extended because new claim 1 indicated all the features in granted claim 1 and the newly incorporated features were merely elaborations on those contained in granted claim 1. The extent of protection conferred by a European patent was determined by the content of **all** claims, not that of one or several only. Thus, for example, even though an independent claim lacked novelty a claim dependent on it could still be valid and the patent proprietor could restrict himself to that claim. It was, moreover, irrelevant when determining the extent of protection whether features were referred to in the prior art portion or characterising portion. The transposition of information from one to the other did not therefore contravene Art. 123(3) EPC.

4. Change of claim category

Enlarged Board decision **G 2/88** (OJ 1990, 93) related to a change of claim category in opposition proceedings, and in particular to the change from a product claim to a use claim. It stated that a change of category of granted claims in opposition proceedings was not open to objection under Art. 123(3) EPC, if it did not result in extension of the protection conferred by the claims as a whole, when they were interpreted in accordance with Art. 69 EPC and its Protocol. In this context, the national laws of the contracting states relating to infringement should not be considered, for there was a clear distinction between the protection which was conferred and the rights which were conferred by a European patent. The protection conferred by a patent was determined by the terms of the claims (Art. 69(1) EPC), and in particular by the categories of such claims and their technical features. In contrast, the rights conferred on the proprietor of a European patent (Art. 64(1) EPC) were the legal rights which the law of a designated contracting state might confer upon the proprietor. In other words, in general terms, determination of the "extent of the protection conferred" by a patent was a determination of what was protected, in terms of category plus technical features; whereas the "rights conferred" by a patent were related to how such subject-matter was protected.

When deciding upon the allowability of an amendment involving a change of category, the considerations were, in principle, the same as when deciding upon the allowability of any other proposed amendment under Art. 123(3) EPC.

An amendment of granted claims directed to "a compound" and to "a composition including such compound", so that the amended claims were directed to "the use of that compound in a composition" for a particular purpose, was not open to objection under Art. 123(3) EPC. For it was generally accepted as a principle underlying the EPC that a patent which claimed a physical entity per se, conferred absolute protection upon such physical entity, for all uses of such physical entity, whether known or unknown. It followed that if it could be shown that such physical entity (eg a compound) was already part of the state of the art, then a claim to the physical entity per se lacked novelty. It also followed that a claim to a particular use of a compound was in effect a claim to the physical entity (the compound) only when it was being used in the course of the particular physical activity (the use), this being an additional technical feature of the claim. Such a claim therefore conferred less protection than a claim to the physical entity per se.

In **T 912/91** the appellant/patentee claimed the use of graphite for obtaining a sintered composite ceramic body having certain characteristics. The board held that the change of claim category from the granted product claims for composite bodies to these use claims did not broaden the scope of protection of the granted claims. Even if it were considered that the use claim was notionally equivalent to a claim to a process including the step of using the graphite in the sintered body and that the effect of Art. 64(2) EPC was to confer protection on the product resulting from this process as well, this would not represent an extension of protection within the meaning of Art. 123(3) EPC, since the sintered composite body was defined in the use claim in a more restricted way than the composite body of the granted claim (narrower range of the graphite content, etc.).

In **T 134/95** a patent had been granted in respect of a "container for medical use". The claimed apparatus was designed to permit the separate storage and the mixing, at the time of use, of three predefined and different compounds. The protection conferred therefore related to the apparatus and, necessarily, to its use at least for the purposes of storage and mixing. After amendment, the claim became a use claim, covering only the use of the container and no longer protecting the apparatus as such.

Having pointed out that inventions of this kind were designed with a particular object in mind and could not normally be used for other purposes, the board noted that in this case, the change of category, replacing the granted claim with a claim for the use of the container, had the effect of limiting the scope of protection. The amendment was therefore allowable.

Contrary to the opponents' allegation that a "drip solution" was obtained, the board concluded that the use of the container did not lead to the manufacture of a product; on the contrary, its purpose was to carry out two successive handling operations (the separate and sterile storage of each of the three solutions, and then the sterile compound mixing of these solutions at the time when they were administered) as explicitly stated in the granted claim (in respect of compartments for "separate storage and subsequent mixing, immediately before use" of the three solutions). The intended purpose was to conserve each of the three

solutions during the storage phase (and to mix them immediately before use, avoiding any premature change of the mixture). The two stages of the process therefore in no way had the effect of modifying the starting solutions with a view to obtaining or manufacturing a product. This use therefore fell into the category "use of a physical entity to obtain an effect or result", and on this basis the change of category was allowable.

In **T 279/93** the board found that a claim to the use of a compound A in a process for preparing compound B had no broader scope than a claim to a process for preparing compound B from compound A. It had already been stated in **G 2/88** (see point 2.5) that the technical features of a claim to an activity were the physical steps which defined such activity. In this case, the board considered that process claim 1 as filed, process claim 1 as granted and use claim 1 filed on appeal all related to the same physical steps, and that the claims were therefore of the same scope. On this view, the scope of protection conferred by this use claim was not broader than that conferred by the granted process claim (see **T 619/88**).

A change from a product claim to a claim for the use of the product was also allowed in **T 37/90**, **T 75/90**, **T 938/90** and **T 879/91**.

In **T 420/86** a change from a claim for a process for treating soil, in which X was used, to a claim for the use of X for treating soil was allowed. In **T 98/85** on the other hand, a change from a "process for the preparation of a ... composition" to the "use of this ... composition as a ..." was seen as a breach of Art. 123(3) EPC.

In **T 276/96** the board decided in view of **G 5/83** (OJ 1985, 64) that the change of claim of the type "Method of fabricating item A using item B providing effect C" to a claim of the type "Use of item B in a method of fabricating item A to provide effect C" did not extend the protection conferred, since with both formulations the same activity would be forbidden to competitors.

A change from a product claim to a claim for a process for manufacturing the product is generally seen as unproblematical (**T 54/90**, **T 191/90**, **T 762/90**, **T 153/91** and **T 601/92**). In **T 423/89** the change in category from a product-by-process claim to a manufacturing process claim was admissible. In **T 402/89**, however, the board pointed out, in passing, certain difficulties in interpreting the term "protection conferred".

In **T 5/90** the patent was granted with a claim in the form "a product having product features x and product-by-process features characteristic of process steps y". This claim, however, turned out not to be novel. The patentee finally claimed "a process of making a product having product features x by using process steps y and process steps z".

The board interpreted such a claim as covering the process steps only in so far as a product having product features x actually resulted. This was called a process-limited-by-product claim by the board. The direct product of this process would also be protected under the provisions of Art. 64(2) EPC, but such product inevitably fell within the scope of the product claim originally granted. The board regarded a process-limited-by-product claim of this type as clearly complying with the requirements of Art. 123(3) EPC because it would only be infringed if the product fell within the originally granted product claim and in addition the particular form of manufacture using process steps z was used.

In **T 20/94** the patent in suit in the form as granted exclusively comprised process claims for preparing a product. In the form as amended it comprised a product claim relating to the product per se.

The board stated that the protection conferred by a claim directed to a process for preparing a product covered that process. Pursuant to Art. 64(2) EPC, a product directly obtained by that process was also protected, but it was not protected when obtained by any other process. However, the protection conferred by a claim directed to a product per se was absolute upon that product. The product claim thus conferred protection on that product regardless of the process by which it was prepared.

The appellant attempted to overcome this objection by formulating the product claim as amended in the form of a product-by-process claim using the term "directly obtained". The board did not agree with this line of argument, stating that a product-by-process claim was interpreted as a claim directed to the product per se, since the only purpose of referring to a process for its preparation was to define the subject-matter for which protection was sought, which was a product. Whether or not the term "directly obtained" or any other term, such as "obtained" or "obtainable", was used in a product-by-process claim, the category of that claim did not change. Thus amended claim 1 in the case in question contravened Art. 123(3) EPC.

In **T 426/89** (OJ 1992, 172) the claim related to a process for operating a pacemaker. An actual operating method for a pacemaker for arresting a tachycardia would necessarily be a method for treating the human (or animal) body by therapy using a pacemaker, and would not be patentable. However, the patentee maintained that the claim referred to the steps in a technical method which did not define a method of treatment but rather, in functional terms, the structural features of a pacemaker. The board agreed. If correctly interpreted in accordance with Art. 69(1) EPC, second sentence, claim 1 did not define a method but rather an apparatus (pacemaker) in terms of the functions of its components. Since the reference to a method in the designation of the subject-matter of claim 1 did not make this explicit, the board regarded claim 1 as not "clear" within the meaning of Art. 84 EPC. The differences between the patent according to the auxiliary request and the granted version were that in claim 1 the title of the invention, "Method for the operation of a pacemaker", had been replaced by "Pacemaker". The board pointed out that the amendment of claim 1, including its change of category, did not contravene Art. 123(3) EPC. Claim 1 as granted was already a product claim containing a functional definition of a pacemaker. So the seeming change of category did not alter the content of the claim but simply served to clarify it (see also **T 378/86**, OJ 1988, 386).

In **T 82/93** (OJ 1996, 274) the granted patent contained a claim 1 relating to a method of operating a pacer. The board found that this claim defined a method for treatment of the human body by therapy and therefore was not allowable under Art. 52(4) EPC. It held that the device claim of the auxiliary request was not allowable under Art. 123(3) EPC. The subject-matter protected by the granted claim was a pacer, **when in use**; in contrast, the claim of the auxiliary request only included technical features which defined physical characteristics of the pacer device itself. The board explained that in general terms, if a patent as granted only included claims defining the operation of a device and therefore containing both "device features" and "method features", and the proposals to amend the patent during

opposition proceedings included claims which only contained "device features", the proposed amendment was not allowable having regard to Art. 123(3) EPC, because the patent as granted conferred protection upon the device only when it was in use so as to carry out the method, whereas the proposed amended patent would confer protection upon the device whether or not it was in use, and would therefore confer additional protection compared to the patent as granted.

In contrast to the findings in **T 426/89** mentioned above, in this case the board held that claim 1 as granted was clear, defined the use of a device to carry out a method of treatment of the human body by therapy and was not a pure "device claim" since it also included method steps. Thus, under such circumstances, Art. 52(4) EPC and Art. 123(3) EPC might operate in combination as an "inescapable trap".

C. Relationship between Article 123(2) and 123(3) EPC

1. Cases of conflict

In **T 384/91** (OJ 1994, 169) the question was referred to the Enlarged Board whether, given the requirements of Art. 123(2) and (3) EPC, a patent could be maintained in opposition proceedings if its subject-matter extended beyond the content of the application as filed, whilst at the same time the added feature limited its scope of protection. The conflict here was that the "limiting extension" had to be deleted as a breach of Art. 123(2) EPC, but to do so would broaden the scope of the patent and thus contravene Art. 123(3) EPC. The case was dealt with under reference number **G 1/93** (see above, III.A.1.2).

This problem was extensively discussed for the first time in **T 231/89** (OJ 1993, 13). In this decision, an additional, limiting feature was added to the claim during grant proceedings. The opposition division revoked the patent on the grounds that the feature had not been disclosed in the application as originally filed but its deletion would contravene Art. 123(3) EPC.

The board of appeal held it to be inappropriate to take paragraphs 2 and 3 of Art. 123 EPC as independent of each other while applying them in conjunction to revoke the patent. This "paradoxical result" could be avoided by interpreting the two paragraphs in terms of their mutual relationship, where one was predominant, ie independent, and the other subordinate, ie dependent:

(a) If Art. 123(2) EPC was predominant, the added feature would have to be deleted in spite of Art. 123(3) EPC;

(b) If Art. 123(3) EPC was to be taken as independent, the added feature could remain.

If the limiting feature was irrelevant for novelty and inventive step, it seemed reasonable to opt for alternative (b); protection of third parties was then crucial. If, on the other hand - as was the case here - the added feature had no technical significance, then alternative (a) seemed appropriate and, thus, the deletion of the feature justified.

In **T 10/91** a neutral feature of no particular value for the skilled person was added during the examination proceedings. The feature had no technical significance. It could therefore stay in the claim, but could not be taken as delimiting when examining for novelty and inventive step.

In **T 938/90**, however, the addition was technically significant and it had to be taken into account in the examination for novelty and inventive step. The board therefore declined to apply the principles developed in **T 231/89** and dismissed the patent proprietor's appeal against the revocation of the patent (see **T 493/93**).

2. Decision of the Enlarged Board of Appeal

In **G 1/93** (OJ 1994, 541) the Enlarged Board of Appeal pronounced on the question of "limiting extensions" as follows:

If a European patent as granted contained subject-matter which extended beyond the content of the application as filed within the meaning of Art. 123(2) EPC and which also limited the scope of protection conferred by the patent, such patent could not be maintained in opposition proceedings unamended, because the ground for opposition under Art. 100(c) prejudiced the maintenance of the patent. Nor could it be amended by deleting such limiting subject-matter from the claims, because such amendment would extend the protection conferred, which was prohibited by Art. 123(3) EPC. Therefore, in principle, if the European patent as granted contained a "limiting extension", it had to be revoked. Paragraphs 2 and 3 of Art. 123 EPC were mutually independent of each other. In this sense, it had to be admitted that Art. 123(2) EPC in combination with Art. 123(3) EPC could operate rather harshly against an applicant, who ran the risk of being caught in an inescapable trap and losing everything by amending his application, even if the amendment was limiting the scope of protection. However, as submitted by the opponent, this hardship was not per se a sufficient justification for not applying Art. 123(2) EPC as it stood in order to duly protect the interests of the public. Nor did it, in principle, matter, that such amendment had been approved by the examining division. The ultimate responsibility for any amendment of a patent application (or a patent) always remained that of the applicant (or the patentee).

The Enlarged Board, however, also mentioned three other instances:

- If the added feature could be replaced by another feature disclosed in the application as filed without breaching Art. 123(3) EPC, the patent could be maintained (in amended form). This might turn out to be a rare case in practice (see *infra*, **T 166/90**).

- An added undisclosed feature without any technical meaning could be deleted from a claim without violating Art. 123(3) EPC.

- An added feature, which did not provide a technical contribution to the subject-matter of the claimed invention but merely limited the protection conferred by the patent as granted by excluding protection for part of the subject-matter of the claimed invention as covered by the application as filed, was not considered as subject-matter which extended beyond the content of the application as filed within the meaning of Art. 123(2) EPC. In this case also the patent

could be maintained (see III.A.1.2).

3. Resolving the conflict in exceptional cases

In some cases the conflict between Art. 123(2) and (3) EPC can be resolved. In **T 166/90** the board allowed an inadmissible feature in a granted claim to be replaced by other disclosed features, since this did not extend the scope of protection. The invention concerned an opaque plastic film. The product claim as granted contained a feature stating that the density of the film was less than the arithmetical density from the type and proportion of the individual components. In opposition proceedings the patent proprietor claimed a process for manufacturing the film, but without including in his process claim the density-related feature. The board examined whether this would broaden the scope of the patent, asking if the process claim features which replaced the deleted feature necessarily limited the claim to films - like that in the granted product claim - with a density less than the arithmetical one. The board concluded that, with a probability bordering on certainty, the process now claimed would produce an opaque film of a density less than that arithmetically derivable from the type and proportion of its individual components. Thus, deleting the density-related feature had not in fact extended the scope of protection.

In **T 108/91** (OJ 1994, 228) the board concluded that Art. 123(3) EPC was not contravened when an incorrect technical statement which was evidently inconsistent with the totality of the disclosure was replaced by an accurate statement of the technical features involved. This case concerned a container-closure arrangement, which, according to information later included in the claim, was unstressed, whereas it was clear from the description that this part was in fact under tension. **T 673/89**, **T 214/91** followed **T 271/84** (OJ 1987, 405), **T 371/88** (OJ 1992, 157) and **T 438/98**, in ruling that amending a claim to remove an inconsistency did not contravene Art. 123(2) or (3) EPC if the claim as corrected had the same meaning as the correct interpretation of the uncorrected claim in the light of the description.

In **T 553/99** the board stated that if a claim as granted contained an undisclosed, limiting feature in contravention of Art. 123(2) EPC it could be maintained in the claim without violating Art. 123(2) EPC provided that a further limiting feature was added to the claim which further feature was properly disclosed in the application as filed, and deprived the undisclosed feature of all technical contribution to the subject-matter of the claimed invention.

D. Rule 88 EPC, second sentence

In **J 42/92** the board had to decide whether a request under R. 88 EPC, second sentence, can be made after grant. It came to the conclusion that a request under R. 88 EPC for amendments to the description or claims may only be filed during the pendency of application or opposition proceedings. Under Art. 97(4) EPC, the decision to grant a European patent takes effect on the date on which the European Patent Bulletin mentions the grant. After this date, R. 88 EPC can only be applied while opposition proceedings are pending. In the case at issue, the decision to grant the patent had already taken effect, and no opposition had been filed. The appeal had therefore been dismissed, since the EPO had ceased to have jurisdiction to consider a request under R. 88 EPC at the time when the request was filed.

The board also pointed out that there is no reason why, once no application or opposition proceedings are pending before the EPO, decisions on the question of corrections (bearing in mind the requirement of obviousness to a skilled person) should not fall within the sole jurisdiction of the national courts or other authorities responsible for proceedings in which this question may arise.

1. Relation to Article 123(2) EPC

The boards have been called upon several times to discuss the question whether a correction under R. 88 EPC, second sentence, could be allowed even if the requested amendment would constitute an extension of protection within the meaning of Art. 123(2) EPC over the disclosure made on the date of filing. In decisions **T 401/88** (OJ 1990, 297) and **T 514/88** (OJ 1992, 570) the answer was negative. In **T 200/89** (OJ 1992, 46) the board took a similar view with regard to Art. 123(3) EPC and concluded that requests for correction under R. 88 EPC and requests for amendment under Art. 123 EPC had to be considered separately.

A further question was whether, for the purposes of correction under R. 88 EPC, second sentence, the evidence that nothing else would have been intended than what was offered as the correction could take the form of documents filed only after the application. On this point a different conclusion was reached in **T 401/88** (OJ 1990, 297) than in **J 4/85** (OJ 1986, 205). As a result of referrals by the President of the EPO (**G 3/89**, OJ 1993, 117) and by a board of appeal (**G 11/91**, OJ 1993, 125) both questions came to be decided by the Enlarged Board. The Enlarged Board's conclusion was that the parts of a European application or patent relating to the disclosure (description, claims and drawings) could be corrected only within the limits of what the skilled person would derive directly and unambiguously, using common knowledge and seen objectively and relative to the date of filing, from the whole of these documents as originally filed. Such a correction was of a strictly declaratory nature and thus did not infringe the prohibition of extension under Art. 123(2) EPC. Other documents - notably priority documents and the abstract - could not be used for correction purposes even if filed together with the application, but could, however, be adduced as evidence of common general knowledge on the date of filing. Evidence of what constituted such knowledge on that date could be furnished in any suitable form. And documents not relating to the disclosure could, under certain circumstances, be included partially or wholly in the disclosure by means of reference.

No correction was possible if there was any doubt as to whether a mistake existed, or whether nothing else could have been intended other than what was offered as the correction.

In **T 1008/99**, the request for correction of errors concerned a European divisional application which had been filed with a wrong description not related to the earlier (parent) application. The wrongly filed description should therefore be replaced by the description of the parent application.

A divisional application under Art. 76 EPC is, according to established case law, to be examined quite separately from its parent application and must itself comply independently

with all the various requirements of the EPC. The board held that for the purposes of R. 88 EPC, the error therefore had to be **apparent from the divisional application itself**, and the parent application could not be used to demonstrate that the error was obvious. Even if it was apparent from the filed description, claims and drawings that they did not belong together, it was not immediately clear from the divisional application itself which of these parts was not correct. For that reason alone the requested correction under R. 88 EPC, second sentence, was not allowable.

Moreover, according to decision **G 2/95** (OJ 1996, 555), point 2 of the reasons, the interpretation of R. 88 EPC, second sentence, had to be in accord with Art. 123(2) EPC, which meant that a correction under R. 88 EPC was bound by Art. 123(2) EPC, in so far as it related to the content of the European patent application as filed. A correction could therefore be made only within the limits of the content of the parts of the application which determined the disclosure of the invention, namely the description, claims and drawings. Other documents could only be used for proving what was common general knowledge on the date of filing. As far as a divisional application pursuant to Art. 76 EPC was concerned, the content of the application which determined the disclosure was that of the divisional application as filed, rather than that of the earlier (parent) application.

2. Obviousness of the error and the correction

In the past, the boards have allowed corrections under R. 88 EPC, second sentence, provided it was immediately evident to the skilled person that an error had occurred and how it should be corrected. In **T 640/88** and **T 493/90** the required correction to an error in the claim was evident from the description. In **T 488/89** the reference to a parallel application enabled the skilled person to establish without difficulty the correct limit values. In **T 365/88** it was ruled that an abbreviation in the claim could be corrected because it appeared correctly in the description; an additional Roman numeral I in the abbreviation of an enzyme was implicitly disclosed because at the time of filing only one enzyme of this type was known, and clarification prevented confusion with enzymes of the same type discovered at a later date.

In **T 990/91** the board allowed the correction of a chemical name on the grounds that an obvious error had been made in naming a salt which was the subject-matter of the application - the molecular formula of this salt was clear from the application. However, the molecular formula corresponding to the name was different. Guided by the content of the application and taking into account cited documents which were published before the priority date of the application in question, the correction required would be immediately evident to the skilled person.

In **T 417/87** the board of appeal allowed the number of a publication cited in the original description to be corrected under R. 88 EPC, second sentence. In **T 158/89**, however, correction of a percentage range of a component was not allowed. In the board's view, the skilled person could have deduced from inconsistencies in the claims and description that an error had occurred. However, there were two plausible ways of correcting it. Since the skilled person would have regarded both alternatives as equally plausible, it was not immediately obvious that nothing else had been intended other than the proposed correction.

Standard of proof for allowing amendments and corrections

In **T 606/90** the board allowed a correction pursuant to R. 88 EPC, second sentence, in the opposition proceedings although the correction was not so obvious from the published text of the patent that it was immediately evident that nothing other than the proposed correction could have been intended. The applicant had filed typed amendments to the claims and the description and had also submitted the "working document" with the handwritten corrections for the dossier. The typed version of claim 1 omitted the detail which was now the subject of a request for correction pursuant to R. 88 EPC; the same detail was present in the corresponding passage in the description. When the text was being prepared for publication of the patent, the detail in question was also omitted from the description owing to an error by the EPO. The board concluded that the omission in the description should not be taken into account when considering the admissibility of the correction and stated:

"It is therefore clear that the phrase in question was omitted from the typed version of claim 1 as a result of an error by the applicant and that the reader of the patent would immediately have noticed the need for correction of this error if a transcription error had not likewise been committed by the EPO. The correction requested is therefore admissible within the terms of R. 88 EPC".

In **T 955/92** the appellant requested that under R. 88 EPC the words "silica" and "alumina" in the claims and description be replaced by "silicon" and "aluminium" respectively. It argued that the ambiguous expression "silica to alumina atomic ratio" could only have two meanings, either "silicon to aluminium atomic ratio" or "silica to alumina molar ratio" and that it was evident to a skilled person that the correction could only be as requested.

The board did not share this view. It accepted that a mistake was obvious and that the interpretation according to the correction sought was more likely than the alternative. However, referring to **G 3/89** (OJ 1993, 117), it emphasised that the correction should be unambiguously derivable by a skilled person, using common general knowledge, from the description, claims and drawings of the patent application on the date of filing. The board held that in the case in point the reasons given by the appellant to show that only the requested correction could have been intended were not based on the level of general knowledge on the date of filing. In order to arrive at the conclusion that the requested correction was the only physically meaningful one, experiments had had to be performed which needed more than common general knowledge, and the results thereof would not have been available on the date of filing.

E. Standard of proof for allowing amendments and corrections

In **T 383/88** the board held that the normal standard of proof in proceedings before the boards of appeal, namely "the balance of probability", was inappropriate for determining the allowability of an amendment under Art. 123(2) EPC. Instead, a rigorous standard, ie one equivalent to "beyond reasonable doubt" was considered by the board to be the right one to apply in such a case, since applying a lower standard could easily lead to undetected abuse by allowing amendments on the basis of ostensibly proven common general knowledge.

It had frequently been argued that certain technical features could be directly and

III.E. Standard of proof for allowing amendments and corrections

unambiguously derived from a specification as filed by reading it in the light of common general knowledge. However, the board recommended viewing this approach with considerable caution. Firstly, the issue of the allowability of an amendment under Art. 123(2) EPC had to be decided by reference to what could be derived from the patent application as filed in the light of common general knowledge and not vice versa. Secondly, it was notoriously difficult to prove common general knowledge. For example, information might be generally disseminated, and therefore known within the community of skilled addressees, but it might well, at the same time, not be commonly accepted. Furthermore, too much reliance could not be placed on affidavit evidence from over-qualified persons, for the relevant knowledge was that of a notional, ie average, skilled addressee, and not that commanded by leaders in the relevant scientific discipline or field. The board added that it could not normally be the case that an affidavit by a single person was sufficient to discharge the burden of proof to the strict standard that was required.

In **T 581/91** the board held that the balance of probabilities was not an appropriate criterion to be applied in a case where a correction under R. 88 EPC was at stake. Following decision **T 383/88**, the board stated that a more rigorous standard, that is one equivalent to "beyond reasonable doubt", ought to be applied.

In **T 795/92** the board stated that Art. 123(2) EPC clearly precluded allowing an amendment if there was any doubt as to whether or not it was derivable from the original application. In the case at issue an upper limit of 89% indicated in claim 1 of the main request for the degree of nickel reduction was not expressly mentioned in the application as filed. The board decided that, in spite of a certain probability in favour of the appellant/patentee's position, the amendment was not allowable because there were various known methods for calculating this value, not all leading to identical results, and the application did not directly and unambiguously disclose which method had to be used.

As to extension of the protection conferred, see **T 113/86** (VI.J.5 c); VII.C.10.1.2).



IV. PRIORITY

The EPO does not normally check the validity of a priority right during examination. A check must be made, however, if relevant prior art has been made available to the public within the meaning of Art. 54(2) EPC on or after the priority date claimed and before the date of filing or if the content of the European patent application is totally or partially identical with the content of another European application within the meaning of Art. 54(3) EPC, such other application claiming a priority date within that period and definitively designating one or more of the same states (see Guidelines C-V, 2.1).

Arts. 87 to 89 EPC provide a complete, self-contained code of rules on claiming priority for the purpose of filing a European patent application (see **J 15/80**, OJ 1981, 213). However, since the EPC - according to its preamble - constitutes a special agreement within the meaning of Art. 19 of the Paris Convention, it is clearly intended not to contravene the basic principles concerning priority laid down in the latter (see **T 301/87**, OJ 1990, 335, Reasons for the Decision, 7.5; **G 3/93**, OJ 1995, 18, **G 2/98**, OJ 2001, 413).

A. Applications giving rise to a right of priority

1. National deposit of industrial design

In **J 15/80** (OJ 1981, 213) it was held that a priority right based on the deposit of an industrial design was not recognised for a European patent application. As the EPC was a special agreement within the meaning of Art. 19 of the Paris Convention, a general understanding by the contracting states to the EPC that the deposit of an industrial design clearly gave a priority right for a national patent application could, by application of Art. 4 of the Paris Convention, lead to an interpretation of Art. 87(1) EPC going beyond its terms and permitting such deposits to give priority rights for European patent applications. However, in the absence of such a general understanding there was no reason to read Art. 87(1) EPC more broadly than its express terms and scope required.

In the board's opinion it was the law under the Paris Convention that, in relation to patent applications, a right of priority under that Convention existed if the prior application was for the protection of an invention as such and contained a disclosure of it. The deposit of an industrial design in essence protected aesthetic appearance. Although the deposited design might incorporate an invention, according to national design laws the deposit would not protect the invention as such.

2. Postdating of the previous application

Swiss patent law allows a patent application to be postdated if it is subsequently amended. In **T 132/90** the patent proprietor had claimed 11.3.1983, the original filing date of the earlier Swiss application, as the priority date for their European application dated 9.3.1984. In 1985 the Swiss Patent Office ordered that the filing date of the Swiss patent application be set at 1.7.1983 following subsequent completion of the technical documentation.

The board of appeal concluded that the original application should serve as the basis for claiming a priority right and that the priority date was the filing date of the original application. The postdating order did not have ab initio effect, and the subsequent fate of the original application was immaterial as far as the priority date was concerned. Furthermore, the patent proprietor had only claimed a priority right with respect to the Swiss patent application with the filing date of 11.3.1983, not for the subsequently filed amendments.

B. Identity of invention

In accordance with Art. 87 EPC a European patent application is only entitled to priority in respect of the same invention as was disclosed in the previous application.

1. Disclosure in the earlier application of the invention claimed in the subsequent application

1.1 Interpretation of the concept of "the same invention" referred to in Art. 87(1) EPC

In opinion **G 2/98** (OJ 2001, 413) the Enlarged Board of Appeal addressed the whole concept of "the same invention" in Art. 87(1) EPC. In recent years, boards have applied different yardsticks to assess identity of invention between a previous and subsequent application. One was to check whether all the features of the invention claimed in the European patent application were disclosed in the priority document ("novelty test"). In **T 311/93** and **T 77/97** in particular, boards looking at the validity of priority claims continued to apply the criterion of at least implicit disclosure used for the disclosure test under Art. 123(2) EPC. Other decisions however followed the principle, developed in "Snackfood" (**T 73/88**, OJ 1992, 557), that adding non-essential features which merely limited the scope of protection did not invalidate the priority claim. **T 73/88** allowed a claim to enjoy priority despite containing an additional feature not disclosed in the earlier application.

In **G 2/98** the Enlarged Board of Appeal, ruling on points of law referred by the President regarding the interpretation of Art. 87(1) EPC, first considered whether interpreting "the same invention" narrowly was consistent with the relevant Paris Convention and EPC provisions. A narrow interpretation means that the subject-matter of a claim which defines the invention in a European patent application - ie the specific combination of features in that claim - has to be at least implicitly disclosed in the application whose priority is claimed. The Enlarged Board held that a broad interpretation, distinguishing between those technical features which related to the function and effect of the invention and those which did not - with the result that an invention could still be considered "the same" even if a feature were amended, deleted or added - was inappropriate and inconducive to proper exercise of priority rights. To ensure a practice fully consistent inter alia with equal treatment for applicants and third parties, legal certainty and the principles for assessing novelty and inventive step, "the same invention" had to be interpreted narrowly and in a manner equating it to "the same subject-matter" in Art. 87(4) EPC. This interpretation was underpinned by the Paris Convention and the EPC, and was entirely consistent with opinion **G 3/93** (OJ 1995, 18). The Enlarged Board therefore ruled as follows on the points of law referred to it:

The requirement for claiming priority of "the same invention", referred to in Art. 87(1) EPC, means that priority of a previous application in respect of a claim in a European patent application in accordance with Art. 88 EPC is to be acknowledged only if the skilled person can derive the subject-matter of the claim directly and unambiguously, using common general knowledge, from the previous application as a whole.

The principles laid down by the Enlarged Board in **G 2/98** mean that many statements made in decisions based in particular on **T 73/88** (holding that adding non-essential and merely scope-limiting features did not invalidate a priority claim) are no longer relevant (eg **T 16/87**, OJ 1992, 212, **T 582/91**, **T 255/91**, OJ 1993, 318, **T 669/93**, **T 1056/93** and **T 364/95**, see also Case Law of the Boards of Appeal, 3rd edition, points IV.B.1.3.3, "Routine choice" and IV.B.4, "Limiting the extent of protection").

The older case law which devised the "novelty" and "disclosure" tests still applies following **G 2/98**. This is that two applications relate to "the same invention" within the meaning of Art. 87 EPC when they both contain "the same subject-matter". The invention or subject-matter of a previous application is to be considered identical to that of a subsequent one if the disclosure of both applications is the same (**T 184/84**). Disclosure in the previous application means that the subject-matter of the claims of the European application must be clearly identifiable in the documents of the previous application taken as a whole (**T 81/87**, OJ 1990, 250, **T 359/92**, **T 469/92**, **T 597/92**, **T 296/93** and **T 620/94**). Identical wording is not required (**T 81/87** (OJ 1990, 250) and **T 184/84**).

In **T 136/95** (OJ 1998, 198), the board stated that identity of invention has to be assessed by reference to the skilled person. A patent application is a technical document, addressed to the skilled person, not a work intended for the general reader. However, the skilled person is not familiar, unlike in the assessment of inventive step, with all the prior art, but only with those elements of it which form part of his general knowledge, and it is on the basis of this knowledge, or by carrying out simple operations derived from it, that he may infer whether or not there is identity of invention.

The board came to the conclusion that it was necessary to give some flexibility to the requirement for identity of invention between the two applications. Some features claimed in the European application need not be expressly mentioned in the previous application whose priority is claimed, provided that the skilled person is able, purely on the basis of his knowledge or by performing simple operations to carry out the invention, to infer these features from the prior application. In the case in question a structural feature claimed in the European patent application was supported by a general functional feature described in the prior application.

1.2 Disclosure in the previous application as a whole

Under Art. 88(4) EPC it suffices if the features claimed in the later application are disclosed by the earlier application taken as a whole (**T 497/91**, **T 184/84** and **T 359/92**). Art. 88(4) EPC cannot be construed as meaning that a priority document must comprise claims in order to form a regular national filing within the meaning of Art. 87(3) EPC which can give rise to a right of priority. If the priority document does not include any claims, this does not mean that

the conditions of Art. 88(4) EPC are not fulfilled (**T 469/92**). Features of the invention may also be disclosed in the drawings (**T 169/83**, OJ 1985, 193, Reasons for the Decision, point 4.2).

1.3 "Essential" features

1.3.1 Disclosure of the essential features in the priority document

In order to give rise to priority all the essential elements, ie features of the invention in the priority document must be either expressly disclosed or directly and unambiguously implied by the text as filed. The question therefore arises as to what constitutes the essential elements, ie features of the invention, claimed in the European patent application, and whether or not these features are disclosed in the respective priority documents (see Art. 88(4) EPC, **T 81/87**, OJ 1990, 250, **T 65/92**, **T 127/92** and **T 296/93**).

In **T 923/92** the board maintained a patent on a process comprising the preparation of a protein with (further specified) human tissue plasminogen activator function. The subject-matter of the claim was defined by means of reference to an amino acid sequence. The sequence contained in the European application was disclosed for the first time in the third priority document (P3). It differed from the sequence reported in the first and second priority documents (P1 and P2) in respect of three amino acids in positions 175, 178 and 191.

The board held that only the priority of P3 could be claimed. In the board's judgment, the skilled person would consider the primary amino acid structure of a protein to be an essential feature thereof because it represented its chemical formula. He would therefore consider the reference to the amino acid sequence of a protein as having not merely an informational character but as being a primary technical feature linked to the character and nature of the product. When comparing the sequences reported in P1/P2 and in P3, the skilled reader, could not know whether, in spite of the differences, the sequences were identical in their physical and biological characteristics; at least on paper the quoted replacements of amino acids could imply important structural and functional differences. The evidence submitted by the patentee was understandably restricted to the testing of a limited number of parameters and left open the possibility that the two polypeptides could differ in many other properties.

In **T 172/95** the appellant/opponent challenged the validity of a priority claim, arguing that for the copolymer the subsequent European application contained information not to be found in the priority document. The board did not follow this argument. As to the objections concerning the fractionation method the appellant could provide no evidence whatsoever for his allegation that the differences which were present would result in different ethylene polymers being claimed in the priority document and in the patent in suit. In contrast, the respondent provided evidence of the contrary.

Regarding the calculation methods for two parameters defining the claimed copolymer the board pointed out that the passage not present in the priority document did not change anything in the actual method of determination of these parameters, but merely specified how a person skilled in the art would normally operate. Therefore, the introduction of the above passage into the application as filed did not change anything in the definition of the

copolymer, hence did not in substance modify the teaching of the priority document. Whereas in the priority document the copolymer could have one or more melting points, in the subsequent European application the possibility of two melting points was excluded.

The board found, however, that a comparison of the descriptions of the previous and the subsequent application showed that the objectives of the invention remained the same. The features which were decisive for the desired balance of properties were not the number of melting points, but other ones. There was no evidence that the number of melting points would play a technical role in the sense of being essential to achieve the invention's objectives. Accordingly, a change in the character and nature of the invention as defined in the priority document could not be identified.

1.3.2 Lack of disclosure of an essential feature

Essential elements missing in the priority document and recognised as essential only later on, are not part of the disclosure of the previous application and there is then no right to priority (**T 81/87**, OJ 1990, 250, **T 301/87**, OJ 1990, 335, Reasons for the Decision, point 6.3, **T 269/87** and **T 296/93**).

In **T 1054/92** of 20.6.96, claim 1 contained the feature that the absorbent structure had a moisture content of less than 10%. This feature could not be derived from the disclosures in the first and second priority documents. The said upper limit was only introduced by the third priority document. The board could accord to the subject-matter of claim 1 only the third priority date. The feature concerning the moisture content of less than 10% was an essential element. This was made clear by the statement in the description that "in order to ensure that the structure remains substantially unbonded the moisture content of the absorbent structure must be less than about 10% by weight of the dry absorbent structure". Furthermore, the relevant feature appeared in claim 1 as originally filed and was relied upon by the appellant in the examination proceedings when seeking to distinguish the subject-matter of this claim from cited prior art (cf. **T 1052/93**).

In **T 828/93**, priority was denied because three features added to Claim 1 were not disclosed in the priority documents and did not purely limit the extent of protection by, for example, omitting a number of given alternatives or part of a range of numbers (without any special effect being thus obtained); rather they affected the course of the claimed process and the arrangement of the claimed apparatus.

1.3.3 Error margins and definitions of limits

Prior to **G 2/98**, it was sometimes possible to claim error margins or definitions of limits which differed in the subsequent application from the original one. How far such decisions may still apply is not yet clear. This concerns in particular **T 212/88** (OJ 1992, 28), **T 957/91**, **T 65/92** and **T 131/92** (see also "Case Law of the Boards of Appeal", 3rd edition, points IV.B.1.3.4 and 1.3.5).

1.4 Disclosure in the claims of the previous application

T 409/90 (OJ 1993, 40) showed that a broad claim in the previous application was not necessarily a suitable basis for a priority right. This decision was based on the principle that what was disclosed by a priority document was what could be deduced from the priority document as a whole by a person skilled in the art. However, when considering what was disclosed in a priority document's claim it was necessary to bear in mind the purpose of the claim, ie to define the protection sought. The fact that a claim in a priority document was broad enough to cover specific subject-matter filed for the first time in a later application was not by itself sufficient evidence that such subsequently filed subject-matter had already been disclosed in the priority document, or that subsequent claims based on the later-filed subject-matter still defined the same invention as that which was the subject of the priority document.

1.5 Selection from generic formula

T 77/97 related to a case in which two dependent claims 4 and 5 of a European application related to individual compounds which were part of the group defined by the generic formula of claim 1. Claim 3 of the priority document defined by means of a generic formula a group of four chemical compounds, including the compounds according to the two claims 4 and 5 of the subsequent European application.

The board acknowledged that the priority document contained sufficient information for a skilled person to obtain without difficulty the four chemical compounds according to the generic formula of claim 3. However, this affirmative conclusion could not automatically lead to the recognition of the priority in relation to claims 4 and 5 concerned. With reference to decision **T 409/90** (OJ 1993, 40, see above), the board pointed out that it was not sufficient to establish that the compounds concerned fell within the scope of the claims of the previous application, and that they could be prepared without difficulty in accordance with the information contained in this application.

The expression "the same invention" as used in Art. 87(1) EPC had to be interpreted in conformity with the requirements of Art. 88(2) to (4) EPC. Before a decision on the claimed priority could be taken, it was first necessary to **establish the elements** for which this priority was being claimed and whether these elements of the invention were **revealed in a precise manner** in the priority document. The applicant claimed the right of priority not only in respect of the element which distinguished all the compounds claimed in all the claims of the European application from the prior art, but also in respect of the specific combination of individual substituents which precisely defined the actual chemical compounds. It was therefore necessary to examine whether these elements, this set of features, had been revealed precisely by the documents of the prior application, as required by Art. 88(4) EPC.

A strict distinction had to be drawn between this purely intellectual content of the definitions and their information content in the sense of a specific technical teaching. In the case in point, each of the compositions of claims 4 and 5 of the European application was part of the "purely intellectual content" of claim 3 of the priority document, but for all that did not belong to its actual teaching. There was no identity of technical content between claim 3 of the priority application and claims 4 and 5 of the European application as the disclosure of a

IV.B.2. Claiming the Invention disclosed in the earlier application

group of chemical compounds was not exactly equivalent to a list or table showing individual chemical compounds (see **T 7/86**, OJ 1988, 381 and **T 12/81**, OJ 1982, 296). Although there was no doubt that the priority document described a very narrow group as being preferred, it did not, however, distinguish between the four compounds of this group, and neither did it specify that the formula of claim 3 had to be considered as an "abridged" formulation of a list or table indicating four individual chemical compounds. As a consequence, claims 4 and 5 could not be granted the claimed priority right (see also **T 295/87**).

2. Claiming the invention disclosed in the earlier application in the subsequent application

The features of the invention disclosed in the priority application must also characterise the invention claimed in the subsequent application.

2.1 Implicit features of the technical teaching

In **T 809/95**, the opponents submitted that the "thin-walled" feature, which was disclosed in the first priority application as essential, was not contained in granted claim 1. The board of appeal was of the opinion that granted claim 1 was based on a "collapsible" plastic bottle "produced by the blow-moulding method" which had folds "to facilitate a reduction of volume upon the exertion of a pressure applied to the walls by hand". This description in itself implied that the bottle would have to be made from thin-walled plastic flexible enough to be collapsible by hand when empty, as required by independent claim 3 in the first priority application.

2.2 Features missing with respect to the earlier application

2.2.1 Omission of non-essential features

In **T 809/95**, the opponents claimed with respect to claim 1 of the auxiliary request that the claim did not contain all the features which a skilled person would recognise as essential from the second priority document, with the result that the claim was directed to another invention. The board established, however, that the features which the opponents thought were missing were not connected in any recognisably close way with the problem put forward in this priority document. This problem was not solved by the missing features, but by other features, all of which could be found in claim 1 according to the auxiliary request. Thus the subject-matter of this claim was entitled to claim the second priority.

2.2.2 Extension over the earlier application

In **T 134/94** the priority document disclosed a process which worked under specific conditions indicated as features (a) to (d). Requirements (a) and (c) did not appear in the granted claim of the patent in suit.

The board held that this claim was not entitled to priority. As requirements (a) and (c) did not appear in the granted claim the scope of the invention as defined thereby comprised areas which, according to the priority document, did not belong to the invention. Thus the invention

defined by granted claim 1 was not the same as the invention defined in the priority document. On the priority date the technical problem underlying the invention was considered to be solved only if each of the conditions (a) to (d) was satisfied; according to granted claim 1 features (a) and (c) were no longer necessary for solving the problem underlying the invention.

The board argued that the respondent's position, which was that the priority claim should be acknowledged whenever the disclosure of the priority document would destroy the novelty of the claims of the later application or patent ("novelty test"), had no basis either in the EPC or in the EPO case law. Such a position would imply that essential features of an invention disclosed in a priority document could be omitted in a later application based thereon without loss of priority right. However, if an essential feature of an invention was so omitted, the invention was no longer the same, ie the requirement of Art. 87(1) EPC was not fulfilled.

In **T 552/94**, the patent's claim 1 lacked four features which according to the priority document were indispensable for carrying out the invention. In other words, they were no longer essential to the invention as now defined. Citing **T 134/94** and **T 1082/93**, the board found that without those features the invention according to claim 1 could not be the same as that described in the priority document, and the requirements of Art. 87(1) EPC were therefore not met. Priority rights cannot be granted if an essential condition - identity of invention - is not fulfilled (**G 3/93**, OJ 1995, 18).

In **T 1052/93** it was an essential feature of the wash adjunct products claimed in the European patent that they contained sodium perborate monohydrate in conjunction with a functionally defined activator. The priority document only mentioned certain activators complying with the functional definition in the European patent; these specific compounds could not be considered to disclose the broad group of activators functionally defined in claim 1 of the European patent.

In **T 1050/92** the disclosure of the invention in the earlier application provided an adequate basis for replacing the term used in said application with a more general one in the European application.

3. Enabling disclosure in the priority document

Art. 87 EPC requires that the European patent application and the application whose priority is claimed relate to the same invention. Thus, the main criterion in this respect is whether the claimed invention is disclosed in the priority document as a matter of substance, i.e. with all its essential features. In addition, the disclosure of the essential elements must be either express, or be directly and unambiguously implied by the text. Missing elements which are to be recognized as essential only later on are thus not part of the disclosure. This view was confirmed in a number of decisions of the boards of Appeal (**T 81/87**, OJ 1990, 250, **T 301/87**, OJ 1990, 335, **T 296/93**, OJ 1995, 627).

The boards of appeal require a cited document to contain an enabling disclosure for it to cause lack of novelty (**T 206/83**, OJ 1987, 5). According to this principle, the priority document must also disclose the invention claimed in the subsequent application in such a way that a

skilled person can carry it out (**T 193/95**).

In **T 81/87** (OJ 1990, 250), concerning living cells capable of expressing bovine preprorennin, only the priority claim of the second previous application was valid because in the first one the steps leading to the desired bovine preprorennin gene were not sufficiently disclosed. The board took the view that in order to give rise to priority rights the essential elements, ie the features of the invention, in the priority document had to be either expressly disclosed or directly and unambiguously implied in the text as filed; missing elements recognised as essential only later on were not part of the disclosure, and gaps with regard to basic constituents could not be retrospectively filled by relying on knowledge acquired in this manner. It could become a misuse of the priority system if some parties in a competitive situation were allowed to jump ahead of others on the basis of mere expectations and by omitting the critical features of the invention altogether.

In **T 296/93** (OJ 1995, 627) the board examined whether the priority document was deficient in respect of relevant technical information necessary for reducing the claimed invention to practice by the person skilled in the art without undue burden. Equally, in the recent case **T 207/94** (OJ 1999, 273) the board took the view that the requirements of Art. 87 EPC that the same invention be claimed in the priority application and the European patent application were fulfilled if the priority application disclosed the invention claimed in the subsequent European application in an enabling manner.

In **T 767/93** claim 1 of the European patent related to a process which comprised expressing from a recombinant DNA vector in a suitable host organism a polypeptide capable of raising HCMV-neutralising antibodies in humans (HCMV being the acronym for human cytomegalovirus). The board found this invention to be the same as that disclosed in the first priority document: the reported DNA and amino acid sequences were identical and the teaching of the priority document, as it would be read by a skilled person, was not limited to a specific example but was of more general scope, since it referred to the expression of a protein from the isolated genome fragment by using conventional genetic engineering techniques in suitable vectors and also mentioned the possibility of expressing discrete portions of the protein.

The lack of actual human clinical data with respect to "the capability of raising HCMV-neutralising antibodies in humans" did not necessarily lead to the conclusion that essential elements were missing in the disclosure of the first priority document. The patent in suit showed that by proceeding experimentally as taught in the first priority document, HCMV-neutralising antibodies were developed in rabbits. This made it plausible that the same effect could be obtained in humans. Thus, in the absence of any challenge to this by the opponents, the board had no reason to believe that the first priority document was deficient in respect of some relevant technical information necessary for reducing to practice the subject-matter of claim 1.

In **T 919/93**, claim 1 of the European patent comprised a reference to the inactivation of a virus related to Acquired Immune Deficiency Syndrome (AIDS) which was neither cited expressis verbis in the priority document nor implicitly derivable therefrom.

First application in a Paris Convention country

The board referred to **T 449/90** where it was stated that the feature of inactivation of the NANB- hepatitis or AIDS virus upon dry heating had to be testable by the skilled person in order for the European application to fulfil the requirement of sufficiency of disclosure. It was acknowledged in **T 449/90** that before the filing date of the patent in suit, there were no techniques to cultivate the NANB-hepatitis or AIDS virus so that consequently no means for a direct detection of these viruses in a living entity or a cell culture or indirect tracing by measuring the antibodies possibly raised against these viruses was at hand. But there were passages in the application as filed, relating to a method for testing virus inactivation in dry heated blood clotting factor preparations based on the use of thermally highly stable viruses (eg the sindbis virus) as virus inactivation indicators. This technical information was considered by the board in that case to be sufficient for the skilled person to evaluate whether NANB-hepatitis or AIDS virus had been substantially inactivated by the heat treatment and thus the requirements of Art. 83 EPC were found to be fulfilled.

In **T 919/93** however, these passages in the European application as filed, essential for the patent application to meet the requirements of Art. 83 EPC had no counterpart in the priority document, which was thus not enabling for the claimed subject-matter. Thus in the case in point the priority could not validly be claimed.

C. First application in a Paris Convention country

In principle, only the first application filed in a state party to the Paris Convention can form the basis of a priority right. In the EPC, this is made clear in Art. 87(1) EPC.

If, apart from the application whose priority is being claimed in the subsequent European application, an earlier previous application was also filed, it must be established whether the invention claimed in the subsequent application was disclosed in the earlier application, which would render a priority claim based on the later previous application invalid. The same principles have to be applied as when establishing identity of invention between the application forming the basis of priority and the application claiming priority. The question is whether the invention claimed in the subsequent application was already disclosed in the earlier previous application taken as a whole or only in the later one.

In **T 323/90** the board compared the alleged first application with the subject-matter of the European patent and concluded that the former disclosed a different invention to that in the European application and the application from which priority had been claimed: the claimed process (for increasing the filling power of tobacco lamina filler) differed as regards both the moisture content of the tobacco for processing and the first step in the process.

In **T 400/90** priority had been claimed from a US application in respect of a European application concerning an electromagnetic flowmeter. The opponents submitted that the same invention was already the subject of an earlier US application filed by the same applicant outside the priority period: the earlier US application disclosed all the features contained in the European application with the exception of the use of saddle-shaped coils; however, the latter were already known and used frequently. In the board's opinion, the question to be answered was whether the use of saddle-shaped coils had been disclosed in

the earlier US application, and not whether it was obvious to use such coils in place of the magnets disclosed in the earlier application. The board came to the conclusion that the inventions claimed in the US applications were different and priority had rightly been claimed from the later application because, according to the teaching of the earlier application, coils of any shape could be used, whereas according to the teaching of the priority document saddle-shaped coils had to be used.

In **T 184/84** a method of producing a single crystal of ferrite was claimed in a Japanese application, the priority of which was claimed in respect of a European application, and in a previous Japanese application. The starting materials were defined differently in the two Japanese applications. The method disclosed in the later application and the European application was clearly more advantageous than that forming the subject-matter of the earlier Japanese application. The board held that the significant differences in properties were indicative of the presence of different materials and therefore found that the earlier Japanese application was not the first filing of the invention claimed in the European patent application. It based its finding on **T 205/83** (OJ 1985, 363, Reasons for the Decision, point 3.2.1), which stated that the novelty of products prepared using a modified process could be established by the fact that according to an empirical principle in chemistry, a product's properties were determined by its structure, so that differences in the properties of products indicated a structural modification.

The subject-matter in **T 107/96** of the patent in suit contained the feature "angle of contact greater than 120", which feature was disclosed in the later previous US application P2. In P2 a particular advantageous effect was also attributed to the large extent of the said "angle of contact". The earlier previous US application P1 was totally silent about the aforementioned feature "angle of contact" and its advantageous effect. However, the figures of P1 represented diagrammatic and schematic drawings. The board stated that, therefore, in line with the established jurisprudence of the boards of appeal, they could not serve as a basis for determining the extent of a minimum "angle of contact" because dimensions obtained merely by measuring a diagrammatic representation of a document did not form part of the disclosure. Hence, the said feature "angle of contact greater than 120 ", was not disclosed in the earlier previous US application P1 but only in the later previous US-application P2. This meant that the priority from US application P2 claimed by the patent in suit was valid.

D. Partial and multiple priorities

In cases where partial or multiple priorities can be validly claimed the subject-matter of the subsequent application has two or more operative priority dates. In the case of a partial priority that part of the subsequent application's subject-matter disclosed in the previous application has the priority date of the previous application; for the remaining part the date of filing of the subsequent application applies. Where the priority of two or more previous applications is claimed, claims in the subsequent application have the priority date of the previous application in which the matter subsequently claimed was disclosed. Multiple priorities may be claimed for any one claim (Art. 88(2) EPC, second sentence). In such situations the question arises as to whether publication of the content of an application forming the basis of a priority during the priority period belongs to the state of the art which

can be cited against those parts of the subsequent application which have a priority date after the date of publication.

1. Publications during the priority interval

In **G 3/93** (OJ 1995, 18), the Enlarged Board decided that a document published during the priority interval, the technical contents of which corresponded to that of the priority document, constituted prior art citable under Art. 54(2) EPC against a European patent application claiming that priority, if such priority was not validly claimed. This also applied if a claim to priority was invalid due to the fact that the priority document and the subsequent European application did not concern the same invention because the European application claimed subject-matter not disclosed in the priority document.

The Enlarged Board emphasised that the existence of a right of priority depended, *inter alia*, on the fulfilment of the requirement of identity of invention, that is whether the previous application disclosed the same invention as that claimed in the subsequent European application. Where priority was claimed but could not be allowed because the inventions were not the same (despite the fact that the unity requirement was fulfilled), there was no right to priority. Consequently, any publication of the contents of a priority document during the priority interval constituted prior art citable against elements of the European application which were not entitled to priority (see **T 441/91**, **T 594/90**, **T 961/90** and **T 643/96**; for another view see **T 301/87**, OJ 1990, 335, Reasons, point 7.4).

2. Different priorities for different parts of a European patent application

In **T 828/93** the board stated that it followed from Art. 88(3) EPC that different priorities (including no priority, ie only the date of the European application) could be conferred on different parts of a European application. All that had to be checked was whether the subject-matter to be compared with the prior art, ie the subject-matter of the independent patent claims, corresponded to the disclosure of the documents of the priority application as a whole (see Art. 88(4) EPC). Only one (or, as the case may be, no) priority could be conferred on each claimed subject-matter as a whole, insofar as the subject-matter was defined by the given elements as a whole. This subject-matter as a whole represented the invention, which either corresponded to the disclosure of a priority application or not.

T 132/90 concerned a case in which claim 1 of the contested patent contained a feature B not disclosed in the Swiss priority document. The board held that a priority right therefore subsisted only with regard to part of the subject-matter of the claim, ie claim 1 without feature B, but not with regard to the subject-matter of that claim as a whole. The part of the subject-matter entitled to priority did not involve an inventive step. The subject-matter as a whole of claim 1 of the European application, which only had the priority status of the filing with the EPO, was no longer new because the patent proprietors had published all its features after filing the Swiss application.

In **T 127/92** a European patent application claimed the priority of two German utility models, which had been published during the priority interval (documents D1 and D2). The board of appeal took the view that priority had been validly claimed from D1 for claim 1 and several

dependent claims.

It was necessary to establish whether those sub-claims that also contained elements not disclosed in D1 were entitled to claim partial priority from D1 for the subject-matter of claim 1 contained within them. On the basis of the principles developed in **G 3/93** (OJ 1995, 18), the board came to the conclusion that D1 and D2 formed part of the state of the art in respect of these claims and that, consequently, the subject-matter of these claims no longer involved an inventive step. The patent proprietor therefore deleted them.

3. Multiple priorities for one claim

In **T 828/93** (see above) the board confirmed that, because of the legal situation explained above, the possibility mentioned in Art. 88(2) EPC of multiple priorities for any one patent claim related only to instances where, unlike in the case at issue, the claim contained alternatives and could therefore be split into several subject-matters.

In **T 620/94** it became apparent that the granted **claim 1 covered two alternatives** A and B of the invention. Only alternative B was disclosed in the priority document; alternative A was contained only in the subsequent European application. Prior art published during the priority interval rendered obvious alternative A. The patent could thus only be maintained in amended form, ie limited to alternative B.

In **T 441/93** the European patent related to a process for preparing a strain of the yeast *Kluyveromyces*, which comprised transforming *Kluyveromyces* yeast cells with a vector comprising, inter alia, a DNA sequence encoding a polypeptide. The invention disclosed in the priority document was a process for the preparation of new strains of the yeast *Kluyveromyces*, characterised in that protoplasts of such yeast were mixed with and transformed by vector molecules which contained at least one gene for a selectable property and which could be cloned and expressed within the host cells; the protoplasts were regenerated to complete cells with a cell wall; the cells transformed by the vector could be distinguished by means of the selectable property from the other cells and were separated therefrom. The appellant/opponent argued that the generic claim 1 of the European patent did not enjoy the priority of the previous application because the priority document did not mention the transformation of whole cells, which alternative was covered by claim 1 (and other claims) of the subsequent application.

On the evidence put before it, the board concluded that the references to protoplasts in the priority document were of crucial importance and that no mention had been made in the priority document of the possibility of transforming whole cells. The board held that it was decisive what process had been disclosed in the previous application since claim 1 of the subsequent application was directed to a process. In so far as claim 1 covered whole cell transformation, it could only be entitled to the filing date of the European application. It might be the case that all transformed cells which could be made using a whole cell transformation process could also be made using the protoplast transformation process of the priority document. But even this would not mean that claim 1 was entitled to the priority date for process aspects neither disclosed nor enabled by the priority document. Accordingly, claim 1 was entitled to the filing date of the priority application only in so far as it related to the

Partial and multiple priorities

transformation of protoplasts. The claims could thus be divided into two groups with regard to priority: Group A, enjoying priority rights from the previous application and comprising claim 1 in so far as directed to a process for the transformation of *Kluyveromyces* protoplasts, and the related further claims; and Group B, only enjoying the priority of the subsequent European application, and comprising claim 1 in so far as not directed to a process for the transformation of protoplasts, and the related further claims.

Both the Group A and Group B claims were held to be novel and inventive. However, the closest prior art for the Group B claims was a document corresponding substantially to the contents of the priority document and published by the inventors during the priority interval. This ruling was based on the principles set out in **G 3/93** (OJ 1995, 18).

V. RIGHT TO A EUROPEAN PATENT

In **G 3/92** (OJ 1994, 607), the Enlarged Board of Appeal was called upon to consider the application of Art. 61(1)(b) in the following circumstances:

The appellant had lodged a European patent application in 1988. The search report revealed the existence of a prior application filed in 1985 for substantially the same invention by a third party, to whom the appellant had revealed the invention in confidence in 1982. This prior application had been published, and in 1986 deemed to be withdrawn for non-payment of the examination fee. Thereupon the appellant claimed from the UK Patent Office Comptroller, and was granted, entitlement to a patent for the invention disclosed in the prior European application under Section 12(1) of the UK Patents Act 1977. The appellant was thus allowed under Section 12(6) of the UK Patents Act to file a new application in the UK to be treated as having the same filing dates as the prior European application. The appellant then filed a new European patent application in respect of the invention disclosed in the prior application under Art. 61(1)(b) in 1990.

The referring Legal Board of Appeal took the view in its interlocutory decision **J 1/91** of 31.3.1992 (OJ 1993, 281) that the Comptroller's decision was a final decision within the meaning of Art. 61. However, whilst entitlement to a patent was a matter for national courts to decide, those courts had no power directly to provide a remedy under the EPC, that being a matter to be dealt with by the EPO under Art. 61.

The referring board then went on to consider whether pendency was required under Art. 61. As the article was open to differing interpretations, the board decided to refer the question to the Enlarged Board.

The Enlarged Board of Appeal held that when it has been adjudged by a final decision of a national court that a person other than the applicant is entitled to the grant of a European patent, and that person, in compliance with the specific requirements of Art. 61, files a new European patent application in respect of the same invention under Art. 61(1)(b), it is not a pre-condition for the application to be accepted that the earlier original usurping application is still pending before the EPO at the time the new application is filed.

The Legal Board of Appeal therefore ruled in **J 1/91** of 25.8.1994 that the conditions of Art. 61(1)(b) had been met and accordingly remitted the patent application to the Receiving Section for further prosecution.

