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Registry of the Enlarged Board of Appeal

For the attention of Mr. Nicolas Michaleczek (EBAamicuscuriae@epo.org).

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Your reference: G 1/23

Our reference: M12061RAT/HLZ

## A. Introduction

- <sup>1</sup> In accordance with Art. 10 of the Rules of Procedure of the Enlarged Board of Appeal, I would like to take the opportunity to file a written statement as a third party in the above-identified case G 1/23.
- <sup>2</sup> First, I will elaborate on my comprehension of “state of the art made available to the public” within the meaning of Art. 54(2) EPC, then provide my opinion on reproducibility as a requirement for technical information becoming state of the art. Lastly, I will propose an approach that could be applied for determining whether technical information can be considered as state of the art according to Art. 54(2) EPC. Based on these considerations, a suggestion is provided regarding the answers to the three referred questions.

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## B. The Three Referred Questions

1. Is a product put on the market before the date of filing of a European patent application to be excluded from the state of the art within the meaning of Art. 54(2) EPC for the sole reason that its composition or internal structure could not be analysed and reproduced without undue burden by the skilled person before that date?

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2. If the answer to question 1 is no, is technical information about said product which was made available to the public before the filing date (e.g. by publication of a technical brochure, non-patent or patent literature) state of the art within the meaning of Article 54(2) EPC, irrespective of whether the composition or internal structure of the product could be analysed and reproduced without undue burden by the skilled person before that date?

3. If the answer to question 1 is yes or the answer to question 2 is no, which criteria are to be applied in order to determine whether or not the composition or internal structure of the product could be analysed and reproduced without undue burden within the meaning of opinion G 1/92? In particular, is it required that the composition and internal structure of the product be fully analysable and identically reproducible?

### C. Initial Thoughts

<sup>3</sup> The essential point for answering the referral questions are the requirements for technical information to be considered state of the art according to Art. 54(2) EPC. In particular, it is decisive to determine what is encompassed by the term “made available to the public” used in Art. 54(2) EPC.

<sup>4</sup> The underlying problem that leads to diverging decisions in case law is that in **G 1/92** (item 1.4), the Enlarged Board has *inter alia* ruled that:

*“Where it is possible for the skilled person to discover the composition or the internal structure of the product and to **reproduce it** without undue burden, then both the product and its composition or internal structure become state of the art.”*  
[emphasis added]

<sup>5</sup> This paragraph of **G 1/92** seems to require that technical information of a commercial product becomes only available to the skilled person if the commercial product can be reproduced. **G 1/92** does not explicitly deal with technical information that is not part of a commercial product. Thus, the question arises whether **G 1/92** must be regarded as *lex specialis* for commercial products or whether the requirement of reproducibility must be applied to all technical information. Further, even in the case that the reproducibility requirement is only applicable for commercial products, **G 1/92** leaves room for different interpretations as shown by several diverging decisions pointed out by the referring Technical Board of Appeal. In particular, the question arises how far-reaching re-productibility must be, i.e. to absolute extent (reproducibility of all available information of a product) or only with reference to technical information which becomes relevant for a claimed subject matter.

<sup>6</sup> The interpretation of what is meant by technical information “made available to the public” according to Art. 54(2) EPC is of central importance in patent law. To what extent technical information becomes available to the public essentially determines whether a claimed invention is new and inventive. In particular, the interpretation of what is considered as “available” information has a significant influence on the absolute novelty standard which is applied at the EPO. The narrower the state of the art is understood by the EPO, the less strict the absolute novelty requirement becomes. Thus, the more weight is given to the reproducibility of technical information (different requirements can be placed on the extent of reproducibility), the less emphasis is put on the absolute novelty requirement.

**D. What can be state of the art?**

- <sup>7</sup> Before addressing the question whether the condition of reproducibility for technical information is a justified requirement and, in the case of an affirmative answer, how far reproducibility must go, it seems appropriate to first consider the fundamentals of Art. 54(2) EPC.
- <sup>8</sup> First, the question is addressed as to what kind of technical information is suited as state of the art and second whether different standards for the availability of different technical information is appropriate.
- <sup>9</sup> According to Art. 54(1) and 56 EPC a claimed subject matter must be novel and inventive over the state of the art to be considered patentable. The term “state of the art” used in both articles is codified in Art. 54(2) EPC. Accordingly, the definition of “state of the art” for the analysis of novelty and inventive step of a claimed subject matter is the same.
- <sup>10</sup> The definition of the state of the art in the EPC and the corresponding definitions in the national patent law of the contracting states DE, FR and GB vary slightly. Despite the linguistic differences it is generally agreed upon that there should be no substantial legal divergence.

(a) Art. 54(2) EPC:

*“The state of the art shall be held to comprise **everything made available** to the public by means of a written or oral description, by use, or in **any other way**, before the date of filing of the European patent application.” [emphasis added]*

(b) § 3 (1) Satz 2 PatG

*„Der Stand der Technik umfaßt **alle Kenntnisse**, die vor dem für den Zeitrang der Anmeldung maßgeblichen Tag durch schriftliche oder mündliche Beschreibung, durch Benutzung oder **in sonstiger Weise der Öffentlichkeit zugänglich gemacht** worden sind.“ [emphasis added]*

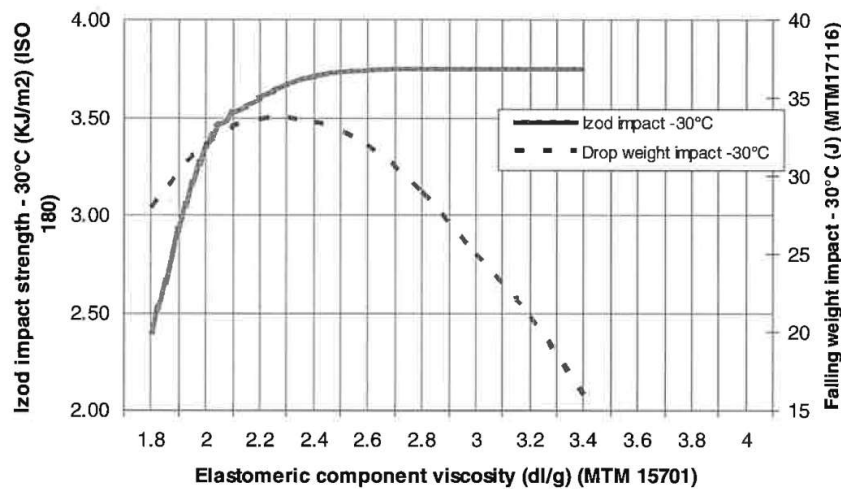
(c) UK patent act

*“The state of the art in the case of an invention shall be taken to comprise **all matter (whether a product, a process, information about either, or anything else)** which has at any time before the priority date of that invention been **made available to the public** (whether in the United Kingdom or elsewhere) by written or oral description, by use **or in any other way.**” [emphasis added]*

(d) Code de la propriété intellectuelle

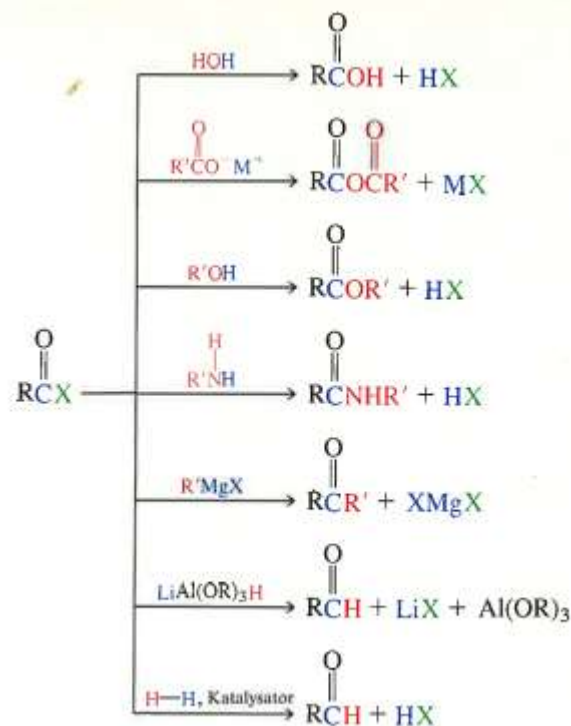
„L'état de la technique est constitué par **tout ce qui a été rendu accessible au public** avant la date de dépôt de la demande de brevet par une description écrite ou orale, un usage **ou tout autre moyen**” [*emphasis added*]

- <sup>11</sup> As can be taken from the relevant passages above, the definitions of the term “state of the art” in the different jurisdictions are similar, but not identical. A slight difference can be seen as to what is actually understood by the term “state of the art”. In Germany, for instance, state of the art *expressis verbis* includes all **knowledge** (alle Kenntnisse). “Knowledge” also includes information, which is not patentable as such. The fact that a certain piece of knowledge concerns also “non-inventions” cannot mean that this knowledge does not constitute prior art merely because it is not patentable in its own right.
- <sup>12</sup> Art. 54(2) EPC does not use the term “**knowledge**” but remains vague in this regard by stating that state of the art is “**everything**” made available to the public. However, “everything” certainly also covers any “knowledge”.
- <sup>13</sup> For instance, a scientific theory may not be capable of anticipating a technical teaching in a manner prejudicial to novelty. However, at the latest when examining inventive step, it would have to be taken into account as prior art because the knowledge that arises from this theory can render obvious a later invention in combination with a previously published technical teaching. It is rather common when discussing inventive step that reference is made to so called “common general knowledge” evidenced by standard textbooks or to scientific literature that explains certain relationships. An example for a typical relationship belonging to the technical area of the referring Technical Board of Appeal 3.3.03 is depicted below (taken from N. Pasquini “Propylene Handbook”, 2<sup>nd</sup> Edition, p.316):



**Figure 5.10** Impact properties vs. ethylene-propylene component viscosity (matrix viscosity = 1.2 dl/g; C<sub>2</sub>C<sub>3</sub> component = 20%)

- 14 The above shown figure relates to the impact behaviour of a heterophasic copolymer. The figure certainly provides technical information, namely the relationship between impact behaviour and molecular mass (intrinsic viscosity) of the ethylene-propylene component part of the heterophasic copolymer. However, the information provided in the figure is not exhaustive. No exact details about the used polymers (heterophasic copolymers) are given, which therefore also excludes the possibility that the disclosed information can clearly and unambiguously anticipate a possibly claimed polymer. The figure can certainly also not exactly be reproduced as the used polymers for creating the figure have not been mentioned in the "Propylene Handbook". Nevertheless, this figure provides useful technical information, even though it cannot be reproduced and claimed by itself, respectively, as no precise information is provided about the products used to draw the correlation.
- 15 Another example is taken from an organic textbook (K. Vollhard "Organische Chemie", 1st corrected edition, 1990, p 815)



- 16 The depicted reaction schemes cannot be novelly destroying for specific claimed esters or amides as the organic compounds used in the reaction schemes have not been specified. Nevertheless, this reaction scheme provides technical information, namely to which derivatives acid halides can be converted and which additional reactants are typically needed. A reproduction of the figure is impossible as the compounds given in the reaction schemes are not specific compounds but very generic acid halides and other generic organic compounds having different functional groups. The generic reaction scheme for the reaction of acid halides with other reactive compounds is so general that it also includes products, e.g., certain esters, which the skilled person has not been able to synthesize to date.
- 17 The above examples underline that the term “state of the art” has to be broadly understood and cannot be reduced to specific individual objects, such as compositions or devices. **The “state of the art” also includes, for example, correlations, relationships or other general technical information that are detached from specific embodiments.**
- 18 This fact that “state of the art” encompasses more than specific embodiments, like chemical substances, devices, apparatuses etc., namely that “state of the art” is “**everything**” as codified in Art. 54(2) EPC

needs to be considered when asking when “state of the art” is “made available to the public”.

- 19 In other words, when evaluating what the prerequisites are that a state of the art becomes “available to the public” and thus can be used to verify whether a claimed invention is novel and/or inventive, these prerequisites should be applicable for “every” state of the art and not only to specific physical objects or chemical compositions and compounds, respectively.
- 20 Further, Art. 54(2) itself clarifies that it is irrelevant in which way prior art has been made available to the public.
- 21 This concept of absolute novelty, meaning a patentable invention must be novel compared to all teachings that have been made available to the public at any time, anywhere and in any way, which covers also public prior use is applied in all mentioned jurisdictions. This basic concept has also been emphasized in the *Travaux Préparatoires* to the EPC (Proceedings of the 1<sup>st</sup> meeting of the Patents Working Party held at Brussels from 17 to 28 April 1961 (page 11: “Discussion of Article 14 of the Preliminary Draft, LT 234/82, Section 5, IV/2767/61 - E )):

*“The Chairman pointed out that the Co-ordinating Committee had given specific instructions that the concept of absolute novelty be used”*

- 22 The only criterion is that it has been made available to the public and the requirements for public availability cannot be made dependent on the nature of the technical information (oral disclosure, written disclosure, distribution of objects or use of objects, or “in any other way”).
- 23 The Enlarged Board of Appeal when dealing in **G 1/92** with the question

*“Is the chemical composition of a product made available to the public by virtue of the availability to the public of that product, irrespective of whether particular reasons can be identified to cause the skilled person to analyse the composition”*

also emphasized in item 1.2 that

*“It should also be noted that Article 54(2) EPC does not make any distinction between the different means by which **any information** is made available to the public. Thus, information deriving from a use is governed in principle by the **same conditions** as is information disclosed by oral or written description.”* [emphasis added]



- <sup>24</sup> Hence, **G 1/92** seems to confirm the conclusion that no distinction shall be made as to how different technical information is made available. That is, the same conditions must be applied for any possible source, be it oral description, written description or use. It is further noted that the Enlarged Board of Appeal also uses the term “information” in connection with “state of the art” and thus applies the same understanding as explained above, namely that state of the art covers more than physical objects or chemical compounds and compositions, respectively. Even though **G 1/92** was formally restricted to the requirements for public availability of commercial products, it would seem that the Board’s reasoning was more general. Thus, it is reasonable to conclude that the Board of Appeal would like to impose the same requirements for any technical information be it a commercial product or any other disclosure. The Board’s conclusion to apply the same requirements to any type of technical information appears justified.
- <sup>25</sup> Therefore, it is concluded that every technical information can be state of the art and the prerequisites on technical information to become available to the public must be the same for each technical information.

**E. What are the basic requirements for technical information to become state of the art?**

- <sup>26</sup> With regard to patent applications, the EPC codifies *inter alia* the requirements a patent application must fulfil in order to be granted. According to the EPC, the subject matter for which protection is sought must be both new (Art. 54 EPC) and inventive (Art. 56 EPC) over the state of the art. A further important requirement is that the invention must be operable for a person skilled in the art when taking into account its general technical knowledge (Art. 83 EPC). The condition of operability is based on the general principle that in return for the grant of an exclusive right for a certain period of time, the invention must be sufficiently disclosed, such that it can be carried out by a person skilled in the art.
- <sup>27</sup> As to the “state of the art”, the only real requirement under Art. 54(2) EPC is that it be “made available to the public.” As already discussed, due to the broad definition of what technical information can be, namely “everything”, and that there are practically no limits to the publication of technical information (“written or oral description, by use or otherwise”), the only real limitation seems to be the accessibility of the technical information.

- 28 It is the common understanding that the term “made available” means that the skilled person must have the option to gain access to the information or object / product.
- 29 In the case of a written disclosure, the situation is rather simple. As soon as a written disclosure is, for instance, laid open in a library, the skilled person can access the information disclosed therein.
- 30 In the case of a commercial product, the skilled person can have access to the information of said product by purchasing it.
- 31 How far-reaching the information content of such a disclosure is depends on the circumstances.
- 32 In the case of a written disclosure, at least everything that is *expressis verbis* described therein is accessible. There may be additional information that automatically results from the written information content of the written disclosure. For instance, when reworking a specific example described in a written disclosure, further information may become accessible which is not described as such in writing. As an example, when reworking a certain organic compound according to the information provided in the written disclosure, the skilled person is in a position to gather additional information from said organic compound, which is not described in the written disclosure as such. By reworking the chemical compound, the technical expert is now in possession of the compound and can thus analyse it to whatever extent desired. The skilled person can, for example, determine the melting point of said chemical compound and thus obtain information, which might not have been derivable from the written disclosure. On the other hand, if the written disclosure is in the form of the organic textbook figure reproduced above, the skilled person cannot rework a certain compound as said figure does not describe any specific reaction, but just provides general reaction schemes. In such a case, the information content very likely does not go beyond what is disclosed in writing.
- 33 In case of a purchased commercial product, the skilled person does not have to rework the product as he/she already has it at hand and can analyse certain properties of the product if he/she wishes to do so.
- 34 In other words, the difference between a physical object or a chemical composition / compound disclosed in a written disclosure on the one hand and a purchased commercial product on the other hand is that the commercial product does not need to be reproduced to analyse properties or internal structures that are going beyond the written disclosure.



- <sup>35</sup> As an example, a specific chemical composition "A" is commercially offered. A skilled person can gain information on the commercially available composition "A" which goes beyond the information that is provided by its datasheet or brochure as soon as he/she has purchased it. How far this additional information goes depends on the circumstances. Properties of the chemical composition "A" may be determinable which are not provided on the datasheet or brochure but can be measured directly on said composition "A", like melting temperature, density or which elements are present in the composition, just to mention some examples. On the other hand, whether the individual components of the chemical composition "A" can be identified depends on the individual case, i.e. whether separation of the components is possible and/or analytical methods exist which allow identification of the different components on the chemical composition "A".
- <sup>36</sup> In case of a written disclosure, like a scientific article in a journal, of the same commercially offered chemical composition "A", the information content is limited to what is provided in written form therein. This written information may be different to the data sheet and/or brochure of the chemical composition "A" and may also be different to what a skilled person can gather by analysing the purchased chemical composition "A". For example, the written disclosure may include information about the components of the specific chemical composition "A" that are not identifiable on the commercial product, but on the other hand, the written disclosure may not disclose the melting temperature of the chemical composition "A", which in turn can only be determined from the commercial product.
- <sup>37</sup> The above example illustrates that the information content provided by a technical information depends on the individual circumstances and does not have to be conclusive. Consequently, different state of the art sources may provide also different information about the same technical matter, as illustrated by the chemical composition "A".
- <sup>38</sup> In particular, it should be understood that a technical information does not need to explain a technical matter to full extent. In the field of chemistry, a technical information may provide some information about a chemical compound or composition but may not provide a full characterisation of the same.
- <sup>39</sup> Regarding the requirements for information to be made available to the public, the Enlarged Board of Appeal in **G 6/88** states (cf. item 8):

*"The word "available" carries with it the idea that, for lack of novelty to be found, all the technical features of the claimed invention in*

*combination must have been **communicated to the public, or laid open for inspection.***

*In the case of a "written description" which is open for inspection, what is made available in particular is the information content of the written description. Furthermore, **in some cases, the information which the written description actually contains, teaching the carrying out of a process for example, also makes available further information which is the inevitable result of carrying out such teaching ...**" [emphasis added]*

- <sup>40</sup> The above-cited paragraphs of **G 6/88** confirm the explanations given above. Information is available to the public once it has been communicated (for instance by written disclosure) or the skilled person can carry out an inspection on a concrete embodiment. **G 6/88** also confirms the above understanding that information of written disclosure may go beyond what is *expressis verbis* described therein. For instance, in case a specific substance is described in a prior art document together with its synthesis, additional information may become available as an inevitable result of the reproduction.
- <sup>41</sup> The Enlarged Board of Appeal also emphasized in **G 1/92**, concordant with the above cited paragraph of **G 6/88**, that no motivation to evaluate the full content of the information of a prior art is required for that information to be made available to the public. It is stated under item 2 of **G 1/92**:

*"There is no support in the EPC for the additional requirement referred to by Board 3.3.3 in case T 93/89 (cf. point II above) that the public should have particular reasons for analysing a product put on the market, in order to identify its composition or internal structure. According to Article 54(2) EPC the state of the art shall be held to comprise everything made available to the public. It is the fact that direct and unambiguous access to some particular information is possible, which makes the latter available, whether or not there is any reason for looking for it."*

- <sup>42</sup> Hence, the only point that has to be evaluated is the exact content of the technical information, to which a person skilled in the art has direct and unambiguous access.
- <sup>43</sup> There seems to be common understanding what is covered by the term "everything" and that the term "available to the public" means that a skilled person can gain access to information, whereby the means by which the information is provided is of no relevance. For instance, a skilled person

has access to properties of a commercial product when these properties may be identified as a result of observing/analysing the product. The skilled person has also access to the components of the product in case they are identifiable as well. On the other hand, the skilled person has mostly no access to the process conditions used to prepare a commercial product as they usually cannot be ascertained by observing/analysing the product.

**F. Should reproducibility be a requirement for the state of the art?**

- <sup>44</sup> In **G 1/92**, the Enlarged Board of Appeal seems to restrict technical information from becoming state of the art despite the skilled person having access to it. According to **G 1/92**, the reproducibility of technical information, at least technical information deriving from commercial products, is required for it to become “available to the public” (cf. item 1.4):

*“An essential purpose of any technical teaching is to enable the person skilled in the art to manufacture or use a given product by applying such teaching. Where such teaching results from a product put on the market, the person skilled in the art will have to rely on his general technical knowledge to gather all information enabling him to prepare the said product. Where it is possible for the skilled person to discover the composition or the internal structure of the product and **to reproduce it without undue burden**, then both the product and its composition or internal structure become state of the art.” [emphasis added]*

- <sup>45</sup> Neither the above-cited paragraph nor any other passage in **G 1/92** provides any further explanation as to why state of the art is only available when it is reproducible. It is just stated that an essential purpose of a technical teaching would be to enable a skilled person to manufacture or use a given product.
- <sup>46</sup> The Enlarged Board of Appeal in **G 1/92** has not considered any consequences of the reproducibility requirement.
- <sup>47</sup> In order to draw a balanced conclusion as to what extent (if at all) a reproducibility of technical information should be applied, it would seem to be useful to look at some examples to realise the consequences of the condition of reproducibility of technical information to become state of the art according to Art. 54(2) EPC.
- <sup>48</sup> In general, one can say that a reproducibility requirement excludes a lot of technical information as prior art.

- <sup>49</sup> As regards commercial products, most of them are not reproducible to an absolute extent. In addition, the information content of a commercial product may change over the years due to advanced analytical methods. This may even result in a situation that due to a newly determined internal structure of a known product, said product becomes suddenly unreproducible (given that this particular aspect of the known product cannot be reproduced), and consequently would be removed from the state of the art. Further, for many commercial products, the process has considerable impact on the final properties, but reproduction is quite often impossible as the exact process cannot necessarily be deduced from the product itself nor may the process be general knowledge.
- <sup>50</sup> The reproducibility requirement would also exclude natural products from the state of the art which cannot be reproduced by a skilled person.
- <sup>51</sup> In the following chapter, it is elaborated in more detail which technical information would be removed from being state of the art when an absolute reproducibility requirement is applied.

## **I. Reproducibility to an absolute extent**

### **1. An unattainable requirement**

- <sup>52</sup> A purchased commercial product can be analysed in any way as long as the product is accessible to all the possible analytical methods. In other words, there are no limits to the analysis of a product other than what is technically possible. In most cases, it is possible to identify a specific characteristic of a commercial product, for which one must conclude that a skilled person, based on his general knowledge, cannot rework this product in such a way that this product also satisfies this exact, specific characteristic.
- <sup>53</sup> For instance, a skilled person can reproduce a commercial mixer with a certain driving gear. However, the driving gear of the commercial mixer may have a certain failure stress, which is not reproducible for the skilled person as he cannot identify from the gear how this failure stress is reached, nor is it general knowledge. Would such a mixer be excluded from the state of the art for the sole reason that the skilled person cannot reproduce the driving gear with the specific failure stress?
- <sup>54</sup> For another example, it is referred to a commercial pill with a specific release profile of an active agent. The specific release profile depends on a combination of specific components having a certain crystallinity, which cannot be clearly and unambiguously identified from the commercial pill.



Would such a commercial pill not be state of the art because the crystallinity of the components of the pill is unknown to the skilled person?

- 55 In yet another example, a transistor with low leakage current is commercially available. The extent of leakage current is the result of a specific process within the transistor. Would a computer containing the transistor with low leakage current not be state of the art, only because the skilled person is unable to reproduce the transistor with the specific leakage current as the process is not deducible from the transistor itself, nor is the process state of the art?
- 56 In a further example, would a commercial polymer with a certain xylene soluble content not be state of the art for the sole reason that the specific xylene soluble content depends on a specific catalyst which is not identifiable on the commercial polymer?
- 57 The list of examples can be continued indefinitely. The essential point is that, as a rule, one will always find a property of a commercial product that makes it impossible for the skilled person to manufacture this commercial product with exactly this one property without having further information available going beyond general knowledge. The examples also show that these properties are not necessarily trivial properties but properties that may well be important depending on the use of the product.
- 58 In contrast to a commercial product, an **absolute** reproducibility is not required, if a skilled person has to rework an example disclosed in a written disclosure. The reason is that the information that can possibly be gathered from the written disclosure is more limited, i.e. is not absolute. That is, in case of a written disclosure, reproducibility is always accepted as soon as the properties mentioned in the written description are reached.
- 59 With this in mind, the discrepancy between written disclosures and commercial products can be demonstrated in view of the commercially available mixer mentioned above. If the written disclosure describes the same mixer as commercially available, but the written disclosure does not address the failure stress of the driving gear, the written disclosure is state of the art as reproducibility is possible (as the precise failure stress of the driving gear is not essential to the function of the mixer). On the other hand, the commercially available mixer would not be state of the art as the skilled person cannot achieve the relevant failure stress of the driving gear of the commercial product. This seems unjustified as in both cases the skilled person has access to a mixer, but the commercial one provides even more technical information, which allows, for instance, to provide a mixer with longer lifetime. This leads to the counterintuitive situation that

the more technical information is disclosed by a commercial product, the less likely it is to be reproducible to an absolute extent, and therefore the less likely it becomes state of the art.

- <sup>60</sup> Regarding reproducibility to absolute extent, it must be further considered that such a requirement changes over the years as science develops and provides more and more advanced analytical methods, which allow the person skilled in the art to characterise a product more and more precisely, e.g. a chemical composition, like polymers.
- <sup>61</sup> To illustrate the problem of advancing analytical methods over the time, a further example is provided. Assuming that a polypropylene has been produced and commercially sold with a certain molecular weight, melting temperature and isotacticity, the first two features are rather independent from the used catalyst, whereas the latter feature defines the microstructure of the polymer chain being very much dependent on the used catalyst. To precisely measure isotacticity, a specific analytic method is needed (<sup>13</sup>C-NMR). Assuming that this polymer has been produced over many years in the same way by using particularly always the same catalyst, the nature of the polymer has not been altered. However, at the beginning of the production of the polymer the isotacticity was not measurable, as the NMR technology was not advanced enough yet. At that point of time, the commercial polymer was reproducible for the skilled person as it was within the skilled knowledge to produce a polypropylene with specific molecular weight and melting temperature. The isotacticity was not considered as it was at that time an unknown property. However, some years later, isotacticity became measurable and suddenly the skilled person had to know the used catalyst otherwise he could not adjust the specific isotacticity by routine experimentation. As a consequence, a product which was at the beginning of its existence reproducible becomes over the years unreproducible because of the progress in analytical methods.
- <sup>62</sup> This consequence seems to be unjustified. In particular, this consequence seems to be unjustified in view of a comparable assessment of written disclosure.
- <sup>63</sup> In a hypothetical scenario wherein a polypropylene with the same molecular weight and melting temperature as discussed in the previous paragraph has been described in a written disclosure, reproducibility of said polypropylene would be given as it is within the general knowledge to produce such a polypropylene. This written disclosure remains always state of the art as nothing is said of isotacticity in this document. That is, the information content of this written disclosure does not change over the years, whereas the information content of the commercial product



increases over the years as the analytical methods progress. However, it appears to be odd that only because a skilled person can gather more information from a commercial product over the years, said product is considered not being state of the art at a certain point of time since it became irreproducible due to additional available information about the product.

- <sup>64</sup> From the above examples, it becomes clear that reproducibility to absolute extent is not a suitable requirement to evaluate whether technical information becomes available to the public and thus state of the art. If one were to apply such a standard, the conditions for reproducibility for the commercial products would be incomparably higher than for written disclosures. However, as concluded above, different standards for technical information becoming state of the art must be avoided. Further commercial products would be **almost completely** excluded from being state of the art as absolute reproducibility of commercial products based on general knowledge is technically impossible.

## **2. Non-reproducibility due to lack of technical information**

- <sup>65</sup> When discussing reproducibility to absolute extent, examples have been provided herein illustrating that a skilled person can almost always identify certain properties of a commercial product, wherein said properties cannot be achieved without having access to additional information going beyond the common knowledge of the person skilled in the art.
- <sup>66</sup> It is rather common, especially in the field of chemistry, that certain product properties are the result of specific process conditions. That would mean that most of the commercial products, which contain properties being the result of a specific process would be excluded from the state of the art as in most cases the relevant process conditions cannot be deduced from the commercial product, nor is the process state of the art.
- <sup>67</sup> For instance, a commercial pill with a certain release profile of an active agent, whereby the specific release profile depends on a specific granulation process of the components of the pill, would not become state of the art as the specific granulation process is not general knowledge.
- <sup>68</sup> As a further example, it is again referred to the above-mentioned commercial transistor with certain low leakage current. This transistor would not be state of the art, only because the extent of leakage current is the result of a specific process of the transistor and the skilled person is unable to reproduce the transistor with the specific leakage current as

from the transistor the process is not deducible and also not within common knowledge.

- <sup>69</sup> In the field of polymers, a commercial polypropylene with a specific isotacticity would not be state of the art as the specific isotacticity is dependent on a specific catalyst, the identity of which cannot be identified on the commercial polypropylene.
- <sup>70</sup> The above examples illustrate that many, if not almost all, commercial (chemical) products would likely be excluded from being state of the art as in many cases process conditions have essential influence on the final properties of the product.

### **3. Natural Products**

- <sup>71</sup> A further example of technical information that would be excluded from being state of the art are all natural products that cannot, at least currently, be synthetically produced. For instance, there are a lot of wild fungi known that cannot be cultivated. Would such a fungus not be state of the art? Would a chemical compound, which has been analysed from the fungus, but not necessarily isolated from the fungus, be excluded from being state of the art only because the skilled person cannot synthetically reproduce said compound? Would its pharmaceutical activity, which can be assigned to the chemical compound, be excluded from being state of the art as the skilled person cannot produce the chemical compound? Even though the skilled person may obtain the compound by routine extraction, just as a commercial product may be obtained by buying. This example further illustrates that technical information would have to be unreasonably ignored if the requirement of absolute reproducibility of a product is required.

### **4. Consequences of the reproducibility requirement**

- <sup>72</sup> The above explanations demonstrate that, in case the reproducibility requirement of **G 1/92** is strictly applied, countless instances of technical information would be excluded from being state of the art according to Art. 54(2) EPC. An uncountable number of commercial products, non-cultivable plants or non-producible but analysed substances thereof would be excluded from the state of the art. Furthermore, also all technical information being not related to products as such would be also excluded from the state of the art if indeed only technical teaching is considered as state of the art which enables a person skilled in the art to manufacture a given product.

- 73 This (almost) complete exclusion of commercial products from the state of the art based on reproducibility requirements would also open the possibility to obtain multiple protections of the same product and would also allow competitors to gain protection of an already existing, i.e. marketed and sold, product.
- 74 To illustrate this fact, a product can be conceptualised to be on the market having *inter alia* the relevant properties “A” and “B”. The properties “A” and “B” result in the commercial product being characterised by particularly long shelf life, which is advertised. Further, property “A” is the result of a mixture of components “X1” and “X2” not identifiable on the final product (for instance, because both said components “X1” and “X2” are too similar making separation and identification impossible), whereas property “B” is the result of the production process, which is not deducible from the final product.
- 75 Now either the producer or a competitor applies for a patent, which is directed to a product having the property “A”. To comply with Art. 83 EPC, the patent application explains that property “A” of the product is achieved by a mixture of two different components belonging to the chemical class “Y” (wherein “X1” and “X2” do not fall within class “Y”) inevitably leading to property “A” of the product, justifying broad protection defining the product just by property “A” (for the sake of discussion it is assumed that requirements of Art. 84 EPC are met). If the reproducibility requirement of **G 1/92** is applied, the commercial product having the features “A” and “B” is not novelty destroying even though undoubtedly the claimed subject matter already exists. In other words, protection of a product is obtained which does not provide any new information going beyond what was already known before. The new technical information which may have not even been claimed is actually that two different components of the chemical class “Y” lead to the property “A” of the product (the commercial product achieves the same property “A” by the other components “X1” and “X2”).
- 76 Later on, a further protection is sought either by the producer or competitor for a product having property (B). In this further patent application, a process is described inevitably leading to a product having property (B) (for instance a certain surface roughness). Again, the commercial product having properties “A” and “B” would not be state of the art because of the reproducibility requirement.
- 77 One can even imagine in this constellation a third application, which is directed to a product having the properties “A” and “B”. Of course, it is assumed that the third application discloses all relevant information to obtain the claimed subject matter. Again, the commercial product would

be excluded as prior art because of lack of reproducibility and the other two applications would not anticipate the claimed subject matter as each of both is missing one of the two claimed features. The third application would be very likely also inventive, even in the light of the two earlier applications as the enhanced shelf life is not recognized in both applications and the commercial product cannot be considered as state of the art, even though it is known that a product having properties “A” and “B” reaches also enhanced shelf life.

<sup>78</sup> In those scenarios, the requirement of reproducibility of a commercial product makes it possible to gain several patent protections encompassing a product, which already existed and was accessible to the public.

## **II. Reproducibility to a relative extent**

<sup>79</sup> It has already been pointed out above that reproducibility to an absolute extent is not a suitable standard, as this would mean applying different standards to different means of providing technical information. Written disclosure would be in general more easily reproducible compared to a corresponding commercial product, as the information content of a commercial product is usually much higher than the information content of a product described in a written disclosure.

<sup>80</sup> Accordingly, if the reproducibility of technical information shall be an obligatory requirement for it to become state of the art, care must be taken how this requirement is to be interpreted.

<sup>81</sup> In this regard, the referring Board of Appeal raises the question whether the Enlarged Board of Appeal in **G 1/92** may have indicated that, for instance, reproducibility is required only for the composition and internal structure, but not for the commercial product as such.

<sup>82</sup> If indeed a difference is made between the commercial product per se and its composition and internal structure, then the question arises as to what the internal structure is and what belongs to the product per se.

<sup>83</sup> For example, let us assume a commercial product is the result of a mixture of three components leading to two separate phases. Further, several properties, like melting temperature and density, can be directly measured on the commercial product. Still further, the three components can be identified, and it is general knowledge how to produce the three components. However, it is not known to the skilled person how to reach the two separate phases, which may contribute also to the final temperature and density.

- <sup>84</sup> The density and melting temperature are properties that can be measured **on** the commercial product. Accordingly, both properties would be state of the art as they belong to the commercial product itself, if indeed only reproduction of the composition and internal structure is required, but not for the commercial product. On the other hand, the two separate phases would not be state of the art as they are probably considered as internal structure. Of course, a different view on this matter could be also applied namely that the two phases are identifiable on the commercial product and therefore “belong” also to the commercial product, which would consequently make them state of the art as well. On the other hand, the three components would be not state of the art solely because the commercial product cannot be reproduced since the technical teaching is missing how to produce the two phases with the three known components.
- <sup>85</sup> From the above example, it is immediately clear that a distinction between the product per se, on the one hand, and components and internal structure thereof, on the other hand, causes new issues. In particular, discussions about what belongs to the product as such and what is considered as internal structure or components of the composition would arise.
- <sup>86</sup> Accordingly, the distinction between the commercial product as such and the components and/or internal structure thereof seems to be a rather unsuitable tool for applying a partial reproducibility requirement. It would further mean that a distinction between different technical information is made, whereby for some technical information reproducibility would be required, and not for others. However, as explained above, it is inappropriate to apply different standards for different technical information.
- <sup>87</sup> If indeed reproducibility is considered as a mandatory requirement for technical information to become state of the art, a case could be made that the requirement should be solely focused on the features, which are of relevance for the claimed subject matter (e.g. whether the technical information falls inside or outside of the claimed scope (for novelty)).
- <sup>88</sup> Accordingly, the skilled person would only have to evaluate whether the claimed features identified by technical information can be reproduced. In the case that they can be reproduced, these identified features become state of the art. Such a procedure seems to be also in line with the comments of the Patents Working Party found in the *Travaux Préparatoires* to the EPC (Proceedings of the 1<sup>st</sup> meeting of the Patents Working Party held at Brussels from 17 to 28 April 1961 (page 12: “Discussion of Article 14 of the Preliminary Draft, LT 234/82, Section 5, IV/2767/61 - E )), where it is stated:



*“Replying to Mr. Roscioni, the Chairman stated that an invention was only disclosed if, by virtue of the disclosure, a person skilled in the art could carry out the invention. It did not seem necessary for this principle to be expressly stated in the Convention. If the matter made available to the public did not allow the invention to be carried out, the invention remained novel.”*

- <sup>89</sup> As can be taken from the above-cited passage regarding reproducibility requirement it is not asked whether the technical information as a whole must be reproducible, but whether the claimed invention **identified** in the technical information is reproducible.
- <sup>90</sup> The following examples, which have been already presented, shall demonstrate the consequences of the reproducibility requirement focusing on the claimed features of a patent application and/or patent.
- <sup>91</sup> In case of the commercial mixer with the driving gear having a certain failure stress, such a mixer would be novelty destroying for a claim which is directed to a mixer with **any** driving gear (no certain failure stress is required), because the skilled person is in a position to reproduce the commercial mixer based on general knowledge to the extent that said mixer has a driving gear with a failure stress that is allowed to be different to the commercial product. However, as the failure stress is not a claimed feature of the mixer, the question of the reproducibility of the driving gear having a certain failure stress is irrelevant.
- <sup>92</sup> In case the claimed mixer requires a failure stress for the driving gear as given by the commercial product, the commercial mixer is still state of the art, however just to the extent of a mixer with a driving gear with a failure stress different to the claimed subject matter. Thus, in such a case the commercial mixer would not be novelty destroying, even though all features of the claimed subject matter are met. This is because the skilled person is unable to reproduce the commercial mixer in view of the failure stress requirement. On the other hand, the commercial mixer remains state of the art and might provide a suitable starting point for the discussion of an inventive step.
- <sup>93</sup> Thus, it is only necessary to evaluate which features of the claimed subject matter can be reworked from a prior technical information and which cannot. Features which can be reworked become state of the art while the others do not.
- <sup>94</sup> Another example is the commercial polypropylene having a certain molecular weight, melting temperature and isotacticity. Such a commercial polypropylene would be novelty destroying for a claim in

which a polypropylene is defined only by molecular weight and melting temperature, as a skilled person is in a position to rework the commercial polypropylene in the light of these two features. On the other hand, the precise isotacticity is not state of the art as said feature can only be achieved when knowing the used catalyst, which is however not deducible from the commercial product. Thus, in case a claim is directed to a polypropylene having an isotacticity according to the commercial polypropylene, said commercial product may be still state of the art. Yet, it would not be state of the art regarding the isotacticity feature since this feature cannot be obtained by the skilled person based on general knowledge.

- <sup>95</sup> Yet another example, the commercially available computer with a transistor with low leakage current is state of the art for a claim defining a computer containing any kind of transistor, as the skilled person can reproduce the commercial computer with any kind of transistor. The commercial computer is also state of the art, in case the claim requires a low leakage current for the transistor of the claimed computer. However, the commercial computer does not form state of the art in view of the transistor with low leakage current as the skilled person is unable to produce such a transistor based on general knowledge only.
- <sup>96</sup> Still yet another example is the correlation between impact behaviour and molecular weight of the elastomer of a heterophasic system taken from the "Propylene Handbook". Even though the figure cannot be reworked exactly, a similar correlation would be reached with other heterophasic systems. Thus, the technical information of the table that the impact behaviour of the heterophasic system is dependent on the molecular weight of the elastomer being part of the heterophasic system becomes state of the art, as the figure can be "reworked" to the extent that the relevant information can be obtained. Such information of a prior art might be extremely useful in case the question must be answered whether it is obvious for the skilled person that a certain molecular weight is defined in the claim for solving the object of certain impact property.
- <sup>97</sup> Another example presented above pertained to the commercial pill with a specific release profile of an active agent, whereby the specific release profile depends on the combination of specific components having a certain crystallinity. The specific crystallinity cannot be clearly and unambiguously identified from the commercial pill. Therefore, the commercial pill would not be state of the art for a claim directed to a pill with a certain release profile, since the skilled person is unable to achieve the release profile without additional information, which cannot be derived from the pill as such. In such circumstances, the commercial pill would not be novelty destroying for a claim directed to a pill with low release



profile, even though the commercial pill complies with the claimed features.

<sup>98</sup> As can be taken from the above examples, the approach of only requiring reproducibility of features that are relevant in view of the claimed subject matter increases the amount of technical information becoming state of the art compared to the reproduction to absolute extent. On the other hand, this approach still excludes a high amount of technical information, which would be novelty destroying for a claimed subject matter if considered as state of the art. In particular, this approach would exclude as prior art all commercial products where, for example, their **properties** are the result of unidentifiable components and/or specific process conditions. This applies to the majority of commercial chemical products. As a result, this approach would still allow multiple protection of technical information that undoubtedly exists but is excluded as state of the art as reproducibility is not possible. The requirement of reproducibility to a relative extent would bring about special advantage to claimed subject matter defined by **properties**. As just explained, claimed properties which can be identified on a (commercial) product are often the result of process conditions and/or the specific combination of components not identifiable on the (commercial) product as such. That is, quite often subject matter defined by properties would be grantable in the light of (commercial) products complying undoubtedly with the claimed property features, since the (commercial) products would be excluded as state of the art based on the requirement of reproducibility of the claimed properties. As a result of this possible requirement ("reproducibility to a relative extent"), applicants (be it the manufacturer itself or a potential competitor of the manufacturer) can easily apply (multiple times) for protection for subject matter covering commercial products by relying on **property** features of said commercial products that are obviously fulfilled but cannot be reworked without further information beyond the information content of the commercial product as such. In other words, this condition would open the door to obtain a prohibition right for products already marketed, even though they were undoubtedly known to the public, which appears in sharp contrast to the absolute novelty requirement.

<sup>99</sup> Apart from the fact that, especially in the field of chemistry, a very high number of commercial products would not become state of the art and thus patent protection can be obtained which undoubtedly exists, it should be further mentioned that the requirement of reproducibility in light of the claimed subject matter will certainly also lead to very extensive discussions as to what features of a commercial product are reproducible and which not. Answering legal questions shall not be guided by avoiding complex issues. It is nevertheless useful to understand which issues may arise as a result of the possible legal requirement that reproducibility of a



technical matter shall be judged in light of the claimed subject matter. In this regard, it is also important to understand that the difference between mechanical objects and chemical objects is that in chemistry the claimed subject matter is often defined by properties, covering a high number of similar but not identical compounds.

- <sup>100</sup> Let us assume that a composite is claimed having a filler with a specific aspect ratio and several polymers (i.e polymers which differ from one another) wherein the composite must have a specific density. The density of the final composite is, of course, dependent on the density of the filler and the polymers therein. Let us further assume that a commercial product exists with the required density and having a filler with the required aspect ratio and also multiple polymers. However, the polymers cannot be identified.
- <sup>101</sup> The skilled person can produce without inventive effort based on the information derivable from the commercial product a composite with the required density, wherein the composite contains multiple polymers and the same filler as used in the commercial product. However, it cannot be verified whether the reworking has been correctly applied as the skilled person will not know whether he/she used the same polymers as used in the commercial product. Is such lack of information harmless as a composite has been produced similar to the commercial product that fulfils the claimed features without knowing whether indeed the correct polymers have been used? In case of a written disclosure, such a lack of information would certainly not raise any concerns. That is, reproducibility would not be questioned if the written disclosure describes a composite with the required density and having a filler with the claimed aspect ratio and a polymer mixture, wherein the mixture comprises three different polypropylenes, whereby the three polymers are not defined any further. Reproducibility would be very likely acknowledged, since the skilled person, based on general knowledge, can find a combination of three possible polypropylenes without inventive effort. The selection of three specific polypropylenes would not be needed in that case, since the written disclosure does not require it.
- <sup>102</sup> Hence, whenever properties are to be assessed that define a claimed subject matter, the following question arises: is it sufficient for a commercial product to become state of the art that the commercial product fulfils the claimed properties and the skilled person is able to reproduce the product to an extent that it has the same claimed properties, however without knowing whether said claimed properties have been reached in the same way as in the commercial product? If this was not sufficient, one had to conclude that the structural characteristics behind the property also have to be considered in case of a commercial product. However, this

would mean again that a different standard between written disclosure and commercial products is applied. Furthermore, this would open the door to complex technical issues regarding which structural characteristics are indeed responsible for the final property of the commercial product. At least in chemistry, in most cases it would not be possible to conclusively verify which structural characteristics are exclusively responsible for certain end properties of a product.

- <sup>103</sup> Therefore, the approach to require reproducibility to relative extent of a (commercial) product in the light of the claimed features is also not a suitable tool to judge whether technical information is state of the art.

#### **G. What should be the requirements for the state of the art?**

- <sup>104</sup> As can be taken from the above considerations, even if the requirement of reproducibility of technical information were to be applied for claimed features only, an extremely high amount of technical information would still be excluded from the state of the art. It also opens the door to obtain multiple patents for something that undoubtedly already exists on the market. This clearly contradicts the basic idea of the concept of absolute novelty.

- <sup>105</sup> The reproducibility requirement laid down in item 1.4 of **G 1/92** does not seem to reflect the intention, which can be derived from *Travaux Préparatoires* to the EPC. It is true that in the *Travaux Préparatoires* to the EPC (Proceedings of the 1<sup>st</sup> meeting of the Patents Working Party held at Brussels from 17 to 28 April 1961 (page 12: "Discussion of Article 14 of the Preliminary Draft, LT 234/82, Section 5, IV/2767/61 - E )), it is stated for inventions:

*"Replying to Mr. Roscioni, the Chairman stated that an invention was only disclosed if, by virtue of the disclosure, a person skilled in the art **could carry out the invention**. It did not seem necessary for this principle to be expressly stated in the Convention. If the matter made available to the public did not allow the invention to be carried out, the invention remained novel."*

- <sup>106</sup> On the other hand, in a later protocol (Proceedings of the 5<sup>th</sup> meeting of the Patents Working Party held at Brussels from 2 to 18 April 1962 (pages 141/142 of LT 234/82, Section 4, 3076/IV/62-E)) regarding prior art, to which the referral Technical Board of Appeal pointed, it is stated:

*"Regarding paragraph 2 of Article 14, Mr. Fressonnet drew attention to the French proposal which specified that the prior art*

*had to be made available in a manner adequate to enable a skilled person to produce the subject-matter of the publication.*

*Mr. van Benthem pointed out that that proposed wording amounted to a change of substance. The condition proposed by Mr. Fressonnet was to be found in the Netherlands law and in practice it was a very strict criterion. Very often the descriptions given in patent applications were not sufficient to carry out the inventions. If the French wording were adopted, such prior applications and patents could not be regarded as forming part of the state of the art. Furthermore, there were also purely theoretical publications which could not technically be carried out directly. They were, however, still part of the state of the art.”*

<sup>107</sup> From the above, it can be gathered that reproducibility was not intended as an obligatory requirement for technical information to become state of the art. It is especially interesting to see that it has been recognized by the Patents Working Party that publications would be excluded, as most of them are not reproducible. The above shows that it was a deliberate decision against the reproducibility criterion, as one did not want to be as strict as in the Netherlands to exclude subject matter that was indisputably present at the relevant time but not yet sufficiently disclosed to be reproduced.

<sup>108</sup> Further, in **G 6/88**, it appears that the Enlarged Board of Appeal also does not require reproducibility of technical information to become state of the art according to Art. 54(2) EPC (cf. 2<sup>nd</sup> and 3<sup>rd</sup> paragraphs of item 8):

*“The word “available” carries with it the idea that, for lack of novelty to be found, all the technical features of the claimed invention in combination **must have been communicated to the public, or laid open for inspection.***

*In the case of a “written description” which is open for inspection, what is made available in particular is the information content of the written description. Furthermore, in some cases, the information which the written description actually contains, teaching the carrying out of a process for example, also makes available further information which is the inevitable result of carrying out such teaching (see …).” [emphasis added]*

<sup>109</sup> Thus, in **G 6/88**, it is not required that the technical information must be reproducible. To the contrary, it is pointed out in **G 6/88** if a written description teaches also a process than the inevitable result of said process is also considered as technical information available to the public.

This means that **G 6/88** does not seem to require that reproducibility of a technical information must be given to become state of the art, but in case reproduction is possible the additional information deriving therefrom is also encompassed, i.e. becomes additionally state of the art. Thus, **G 6/88** also seems to follow the same idea as expressed in the 5<sup>th</sup> meeting of the Patents Working Party.

- <sup>110</sup> The motivation to require reproduction of technical information is certainly driven by the consideration that a patent application can be only granted if a skilled person can carry out the claimed subject matter. However, technical information must not conform with the requirements of a patent application. What needs to be evaluated is whether written technical information is technically correct or whether it is flawed or has not yet been achieved.
- <sup>111</sup> A perpetual motion machine, even if it exists on paper, cannot be implemented. For objects disclosed in writing, especially chemical products, it must be verified whether they have been indeed obtained. Therefore, in the case of patent literature, the criterion of Art. 83 EPC is often used to check whether the information content is so sufficient that the described object in said patent literature is also concretely realisable, i.e. that the skilled person can physically obtain it. Thus, it has to be evaluated whether the described object, like a chemical product, becomes **tangible** (“greifbar” in German) for a skilled person. If, for instance, examples of a written disclosure can be reworked, i.e. become tangible for the skilled person, he can verify the correctness of the provided properties thereof and/or may contain further information going beyond the written disclosure. However, the need to verify the true content of the written disclosure is not needed for a clearly existing object, like a commercial product or a natural plant. In such cases, the existence of the object is unquestionably given and does not have to be verified by reworking the existing object again. Accordingly, the commercial product or the natural product is already “tangible” for the skilled person.
- <sup>112</sup> In view of the absolute novelty requirement, it is unjustified to grant a patent for something which undoubtedly already exists and is accessible to the public. If a commercial mixer with a driving gear having a certain failure stress already exists, then the public gains no new technical information by a patent disclosing and claiming exactly such a mixer. The new technical information may probably lie in the process for producing a gear with the certain failure stress, for which it is appropriate to grant patent protection, but not for the broader product itself, since this has already been provided to the public, i.e. it is tangible for the public. The same holds true for a chemical compound, which is known from nature. A natural chemical compound everybody has access to by **routine**

extraction (if routine extraction is not possible, the situation may be different) has to be state of the art, because it is “tangible” for the public. The sole reason that a synthetic manufacturing process has been found for said natural compound for the first time does not justify an exclusive right over the natural compound as such, but only for the novel process.

- <sup>113</sup> Thus, the sole requirement for technical information to become state of the art is that the public can gain access to this technical information and that said information is tangible for the skilled person. In case doubt exists that the technical information is tangible, for instance that an object described in a written disclosure can be physically obtained, reproduction is an appropriate means of verifying that the written technical information is correct.

#### **H. Consequences of the “tangible” requirement**

- <sup>114</sup> As stated above, the same standard must apply to any technical information, regardless how it is disclosed, in order for it to be considered available to the public and thus becoming state of the art according to Art. 54(2) EPC.
- <sup>115</sup> One important requirement is that the skilled person can gain access to the technical information. Under which circumstances the public has access to technical information has been sufficiently clarified by case law and is not the subject of the present case. With respect to commercial products, well-established case law has developed that sets high standards for proving the accessibility of such products.
- <sup>116</sup> The present case deals with the question whether technical information which is undoubtedly accessible to the public can nevertheless be disregarded as prior art according to Art. 54(2) EPC because it lacks reproducibility. As explained above, the reproducibility requirement for technical information becoming state of the art is not a suitable requirement.
- <sup>117</sup> Technical information should become state of the art if it is **tangible** for the skilled person. The term “tangible” shall underline that it is not sufficient to have access to technical information, but also that the skilled person must be able to verify the technical correctness of the same. If a technical information is incorrect, it cannot reflect what is the current stage of development in the relevant technical field.
- <sup>118</sup> In case serious doubts have been raised whether a certain relationship is correct, it must be verified whether such correlations can be recreated by

the skilled person. If the relationship proves to be correct, it is tangible information.

- <sup>119</sup> In case reasonable doubts have been raised that objects described in a written disclosure can be put in practice, it must be verified based on the information provided in said disclosure whether the described object can be indeed realized. If this can be answered in the affirmative, these objects with all their measurable properties are **tangible** technical information.
- <sup>120</sup> However, a commercial product cannot be “incorrect” technical information. Its correctness results from its mere existence. That is, the pure existence of a commercial product excludes any doubt that the product might not exist. In other words, the commercial product with all its identifiable properties is **tangible** technical information.
- <sup>121</sup> When applying the criterion that technical information, which is accessible to the skilled person, has also to be tangible to become publicly available technical information, i.e. state of the art according to Art 54 (2) EPC, it is ensured that only technically feasible information is taken into account as prior art. On the other hand, this approach does not “soften” the criterion of absolute novelty. This approach also does not require a change in the established case law that in the case of written disclosure of an object, the correctness of that disclosure must be verified by reproducibility if there is reasonable doubt in that regard. A departure from some decisions would exist only to the extent that a commercial product need not be reproducible to become prior art because it is already tangible to the public. In addition, it also ensures that inventions that are novel compared to commercial products can also have inventive character, as will be briefly shown below based on the examples already discussed above.
- <sup>122</sup> The commercial mixer having a driving gear with a specific failure stress is full state of the art as said mixer is tangible for the skilled person including the driving gear with the specific failure stress. Accordingly, it is impossible to gain protection for exactly the same mixer. However, it is quite conceivable to obtain a patent that is directed to a mixer having a driving gear with a slightly higher failure stress than what is known from the commercial mixer. Such a mixer would be new and very probably inventive, since the commercial mixer does not teach how to achieve a slightly higher failure stress for a gear.
- <sup>123</sup> To reiterate, another example may be the commercial pill with a specific release profile of an active agent. The specific release profile depends on the combination of specific components having a certain crystallinity that

cannot clearly and unambiguously be identified from the commercial pill. In that case, the situation would be as follows:

- <sup>124</sup> Protection of a pill having the same release profile as the commercial product would not be possible, because this technical information would be tangible from the commercial pill. On the other hand, a claim directed to a pill having the same release profile as the commercial product, but is additionally defined by the crystallinity of the components of the pill would render the claimed subject matter novel over the commercial pill as the crystallinity of the components cannot be derived from the commercial product, i.e. is not tangible from the commercial product. Such a claim would also be very likely inventive, as it cannot be derived from the commercial product that crystallinity of the components is an essential requirement to achieve a specific release profile.
- <sup>125</sup> Similarly, the polypropylene with a specific molecular weight, melting temperature and isotacticity cannot be protected again. However, protection could be sought for a polypropylene with different isotacticity other than the one of the commercial polypropylene, since said commercial product provides no technical teaching on how to alter isotacticity, nor is this necessarily within the general knowledge of the skilled person.
- <sup>126</sup> For a product defined by properties “A” and “B” cannot be granted a patent when a commercial product having properties “A” and “B” is known, i.e. is tangible for the public. However, a claim directed to a product having properties “A” and “B”, wherein further the product is defined by components “X1” and “X2” may be grantable, even though the commercial product contains the components “X1” and “X2”. However, the components “X1” and “X2” are not tangible for the skilled person and thus do not form technical information being state of the art according to Art. 54(2) EPC.
- <sup>127</sup> In this regard, it should be mentioned that the information content of a commercial product may change over the years due to advances in analytic techniques, as already discussed above. That means for the above example, in case the advanced analytic enables the skilled person to identify components “X1” and “X2” at some point of time, also both components become state of the art. In other words, if an inventor seeks protection for a composition with properties “A” and “B” and containing components “X1” and “X2”, this is only possible until the date a skilled person can identify the components “X1” and “X2” on the commercial product. After said date a protection of a composition with components “X1” and “X2” is impossible.

<sup>128</sup> In conclusion, the proposed “tangible” requirement is in line with the absolute novelty concept and provides a clear strategy for the assessment of what is encompassed by the state of the art. It especially allows the same approach for any kind of technical information.

## **I. Proposed Answers to the Referred Questions**

<sup>129</sup> Based on the statements made above, technical information shall become available to the public if the public has access to it and said accessible information is tangible. Therefore the questions should be answered as follows:

1. No. A commercial product is tangible for the skilled person. All accessible technical information, which is also tangible, becomes state of the art.
2. Yes.
3. Neither reproducibility to an absolute extent nor reproducibility in view of the claimed feature is a suitable requirement for the state of the art. The sole requirement should be that the technical information is tangible for the skilled person.

<sup>130</sup> In my opinion, the referral of these issues to the Enlarged Board of Appeal are overdue for some time and I am looking forward to hearing the considerations, opinions and decisions that will hopefully provide clear guidelines for future proceedings dealing with this complex issue.

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