General

Groups are asked to give a summary of the legal position as regards as patent for a purported selection invention in their jurisdiction in relation to the following:

Q1 Legal developments on selection inventions

What specific types of inventions are recognized under the concept of selection invention and are patentable in your jurisdiction? Do you have any examples of selection inventions in a field other than chemical, pharmaceutical or material science field?

With regard to the situation in Germany, first it must be noticed: Although there has been a discussion on 'selection inventions' for decades in Germany, the term is hardly used by German courts. Especially the German Federal Supreme Court obviously sees no reason to create a special term or name for this kind of inventions and to appraise them according to common (special) standards.

Under German law, the possibility that a selection invention in terms of the Working Guidelines is patentable is not restricted to certain kinds of inventions. For example, regarding a machine for which in the prior art it was stated that the radius of a first circular element was smaller than the radius of a second circular element, the German Supreme Court found a solution new, according to which the first radius was smaller than the second, but bigger than half of the second (Federal Supreme Court, 19.05.1981, GRUR 1981, 812, 814 – Etikettiermaschine; Federal Supreme Court, 27.06.1972, BflPMZ 1973, 170 - Legierungen).

Q2 Novelty

Groups are asked to discuss any issues that should be considered with respect to the novelty of selection inventions. For example, is merely carving a range out of a broad prior art disclosure sufficient to make a selection invention novel? Is a different advantage or use, or the same advantage with an unpredictable improvement required for a selection invention to be novel?

As we understand the German Federal Supreme Court’s latest case law, it is to be distinguished between a numeral limitation of a disclosed range of quantity or weight and the selection from a group of chemical compounds that was disclosed by a chemical structural formula.

The numeral limitation of a disclosed range alone does not, in general, establish novelty. According to the Federal Supreme Court’s decision ‘Inkrustierungsinhibitoren’
of 1999, the specification of a range of quantity or weight is a simplified notation of the numerous possible values between the upper limit value and the lower limit value. Explicitly contradictory to the case law of the European Patent Office (e.g. EPO, 10.09.1991, T 666/89, GRUR Int. 1994, 59, 61 – Waschmittel), the Federal Supreme Court stated that, therefore, the comprehensive numeral specification of a range in a document, contained, in general, a likewise comprehensive disclosure of all possible subranges.

The Federal Supreme Court stated, exceptions to this rule were possible only under special circumstances the applicant had to prove. It was of no importance if certain subranges were designated as advantageous, purposeful or preferred (Federal Supreme Court, 07.12.1999, GRUR 2000, 591, 593-594 – Inkrustierungs inhibitoren). The Federal Supreme Court decided that the range from 15,000 to 290,000 that was claimed in the patent, was anticipated by a prior art document that had disclosed the range form 500 to 2,000,000. The Federal Supreme Court did not explain what such ‘special circumstances’ might be. However, the Federal Supreme Court referred to an article in which it had been stated that such formally comprised variants should not be regarded as disclosed, that could not be manufactured according to the state of the art.

To understand the Federal Supreme Court's case law, it must be pointed out that according to the German case law the question what is disclosed by a (prior art) document regarding novelty is to be assessed by the same standards that apply when assessing the admissibility of amendments of a patent application, i.e. if there is subject matter which extends beyond the content of the application as filed (Federal Supreme Court, 19.05.1981, GRUR 1981, 812, 814 – Etikettiermaschine). Regarding the admissibility of amendments of a patent application the Federal Supreme Court repeatedly stated that, by specifying a certain range, all the values between the limit values and all subsets were sufficiently disclosed. (Federal Supreme Court, 12.05.1992, GRUR 1992, 842, 845 – Chrom-Nickel-Legierung). The Federal Supreme Court admitted the limitation of a range that had been disclosed by ‘up to 50 ppm’ in the patent application as filed, to ‘less that 10 ppm’ (Federal Supreme Court, 20.03.1990, GRUR 1990, 510, 512 – Crackkatalysator). The Federal Supreme Court stated that regarding the question if a patent application could be amended by limitation of the claim, it was of no importance, if something had been designated in the description as advantageous, purposeful or preferred (BGH, 20.03.1990, GRUR 1990, 510, 512 – Crackkatalysator).

Regarding chemical compounds the Federal Supreme Court stated in his ‘Olanzapin’ decision of 2008 that, by communicating a structural formula, the single compounds covered by that structural formula were not disclosed as such. For a single compound to be disclosed specifications were required that enable, just like that, the person skilled in the art to ‘get the substance in the hands’. This would, generally, require further information especially for its individualisation. A single compound that was not explicitly designated could be regarded as disclosed only if the person skilled in the art did ‘read it although it was not written’. This would be the case, for example if the person skilled in the art knew the single compound as the usual realisation of the given structural formula and did thus understand immediately that the single compound was meant, too.

The Federal Supreme Court stated it regarded its decision regarding chemical formulas to be in line with the European Patent Office’s case law (e.g. EPO, 19.02.2003, T 940/98 ‘Diastereomere’), according to which only such technical teachings destroyed novelty, that disclosed a substance as an inevitable result of a described method or in specified, individualised form (Federal Supreme Court, 16.12.2008, X ZR 89/07 – Olanzapin).
The finding of properties, effects and advantages that had not been recognised before, cannot, according to German case law, establish novelty of a chemical substance that had been known and identified and was producible (cf. Federal Supreme Court, 17.01.1980, GRUR 1980, 283, 285 – Terephthalsäure; cf. Federal Supreme Court, 11.07.1985, GRUR 1986, 163, 164 – Borhaltige Stähle). If the selected substance is known, the applicant can only seek protection for the surprising properties as a use patent.

Q3 Inventive step or non-obviousness

Groups are asked to discuss the inventive step or non-obviousness requirements in their jurisdiction. If experimental data is used to back up the inventive step or non-obviousness requirement can it be submitted after initial patent filing? Are there any prerequisites or limitations on the late submission of data?

Regarding the inventive step requirement, too, the general rules apply. A ‘selection’ is considered as involving an inventive step if, having regard to the state of the art, it is not obvious to a person skilled in the art. Especially there is an inventive step if the selection invention, from the perspective of the person skilled in the art at the priority date, has a special, surprising or not foreseeable effect or property (cf. Federal Patent Court, 22.04.2008, 5 W (pat) 431/07). This certain effect or property (of the selected range or variant, respectively) must be documented in comparison to the range or variant not selected (Federal Patent Court, 02.05.2007, 5 W (pat) 406/06). If there is no surprising technical effect, the inventive step, according to the general rules, must be denied (cf. Federal Supreme Court, 20.3.2001, GRUR 2001, 730 – Trigonellin).

Regarding chemical compounds, the Federal Supreme Court stated in the ‘Olanzapin’ decision of 2008, the assessment of the inventive step was not always based on the ‘closest’ prior art. Only by hindsight it became recognizable which prior art document came closest to the invention and how the inventor could have started to reach the solution according to the invention. The selection of the starting point needed a justification that normally was established by the effort of the person skilled in the art to find a better solution for a certain purpose. The Federal Supreme Court expressed that a prior art document that contains a structural formula that covers the single compound is not necessarily the starting point for the assessment of the inventive step. Even if, by hindsight, an invention appears to be a selection from a group of chemical compounds, which had been published before, this selection is not necessarily the inventive achievement that has to be examined.

The Patent Office can at any time demand evidence that the effect that is purported in the patent application can be reached (Federal Supreme Court, 20.03.1990, GRUR 1990, 510, 512 – Crackkatalysator). Accordingly experimental data can be submitted after initial patent filing, too. This should be true for selection inventions, too.

Q4 Sufficiency and/or written description requirements

Groups are asked to discuss the sufficiency or written description requirements in their jurisdiction. There may be several aspects to this question: (1) the threshold for sufficiency; (2) the allowable timing for submission of experimental data; (3) the time frame within which sufficiency or written description requirements must be satisfied; and (4) the breadth of claim scope that can be supported by a limited number of examples of asserted or proven advantages. With respect to item (1), please discuss to what extent all members of the class selected by the patentee are required to possess the requisite advantage in your jurisdiction. Is there an absolute requirement that all of
the selected class possess the relevant advantage, or is the patentee excused if one or two examples fall short? Also, with respect to item (4) above, if a new utility is asserted as a selection invention, would it suffice to claim a particular range or selection of components which have been found to be associated with such a new utility or would it be necessary to recite such a new utility in the claims?

(1) The threshold for sufficiency of disclosure of the invention is, internationally compared, low. The Federal Supreme Court repeatedly invalidated patents, whose applications had deficiencies regarding the disclosure, denying novelty or inventive step (Federal Supreme Court, 01.07.1997, Bausch, Nichtigkeitsrechtsprechung in Patentsachen Bd. 1, S. 394 – Kabelnebenstöreffekte). The Federal Supreme Court stated it was not necessary to enhance the requirement of sufficiency of disclosure in order to prevent the application of unfinished inventions. If there were doubts if the purported effect could be reached within a whole range, the Patent Office could at any time demand evidence (Federal Supreme Court, 20.03.1990, GRUR 1990, 510, 512 – Crackkatalysator). However, if it is found that certain variants do not have the purported advantage, the patentability must be, insofar, denied.

(2)/(3) Where required, the applicant must proof that the invention had been workable at the application or priority date. However, this proof does not have to be given in the initial filing documents (Federal Supreme Court, 14.03.1972, GRUR 1972, 541 – Imidazoline).

(4) If the patentability of the invention is based on certain advantages, these advantages have to be explained by the applicant and, if there are doubts, to be proved by experimental results. If the claimed substance is a group of many compounds, comparative experiments can be demanded. These comparative experiments may have to be directed to such a number of compounds (representatives of the group) that it seems plausible that the effect would also occur for the other members of the group (Schäfers in Benkard, Patentgesetz, 10. Aufl., 2006, § 46, 17). A patent claim that is directed to a product does not have to specify the utility or purpose. However, if the patent claim is directed to a certain use, this use must be specified in the patent claim.

Q5 Infringement

If a certain advantage or superior results were the reasons for the grant of a patent on a selection invention, does such advantage or superior result have to be implicitly or explicitly utilised by a third party for an infringement to be established?

If a selection invention is claimed as a new use, what are the requirements to establish infringement? Would a manufacturer of a product that may be used for the new use infringe the patent? Does the intention of an alleged infringer play any role in the determination of infringement?

If it is a product patent that has been granted for the selection invention, it is irrelevant for the question of infringement, what the intent for the production was or if the advantages are utilised.

However, if the selection invention is protected only by a use patent, a (direct) infringement requires that the utilisation of the certain advantage or superior results is reached or at least concretely prepared. Acts that precede the actual use are covered by the protection only if they ‘obviously arrange’ the product for the protected use. Such an ‘obvious arrangement’ can be established, for example, by the addition for the instructions for use or a dosage recommendation (Federal Supreme Court, 21.11.1989, GRUR 1990, 505 – Geschlitzte Abdeckfolie).
The pure making of a product that is suitable for the protected use does not establish infringement. This is also true for the making with the intent to later use the product in the protected way.

Q6 Policy

Groups are asked to give a short commentary as to the policy that lies behind the law on selection inventions in their jurisdictions, and then to consider whether or not such policy considerations are still valid today as technology continues to advance.

There are no specific requirements with respect to patentability of selection inventions in Germany. The general fundamental Rules are applicable. An invention is deemed to be new, if the subject matter of the invention did not belong to the state of the art at the priority date. If a “selection invention” belonged at the priority date to the state of the art, because a more general teaching was known which “included” the selection, is to be determined in accordance with the understanding of the relevant technical expert.

In order to explain this principle vividly: The two claims “1. Method. 2. Apparatus.” claim all methods and all devices, however, they do not disclose all methods and all devices at the same time. Namely, an expert does not get the precise ideas which are necessary for “disclosing” particular devises and methods immediately and without further thinking. The patentability of selection inventions are determined in accordance with this criterion – it is decisive if an expert understands the particular disclosure.

In view of these general criterions it becomes clear why the German Federal Court of Justice did not provide particular case law with respect to “selection inventions”. These thoughts are still valid, even though technology has changed.

With reference to the Examples
Q7  Novelty

In example 1 would the prior disclosure of the compounds containing the generic class of radicals anticipate any claim to a specific compound having a particular radical, or group of specific compounds having a selection of particular radicals in your jurisdiction? In the analysis, does it matter how wide the prior disclosed generic class of compounds is – i.e. would the analysis be different if the prior disclosed generic class consisted of 1,000,000 possible compounds (very few of which were specifically disclosed) as opposed to merely, say, 10?

Example 1: Say a prior-art document discloses a chemical compound characterised by specified structure including a substituent group designated "R". The substituent "R" is defined so as to embrace a generic class of broadly – defined functional groups such as all alkyl or aryl radicals, either unsubstituted or substituted by a halogen and/or a hydroxyl group, although for practical reasons only a very small number of specific examples are given. The (later) alleged invention consists of the selection of a particular radical or particular group of radicals from amongst the generic class, where the selected radical or group of radicals were not specifically disclosed in the prior-art document. The resulting compounds are described as having a new, advantageous property, say as adhesives, not possessed by the prior-art examples.

In example 1 would the prior disclosure of the compounds containing the generic class of radicals anticipate any claim to a specific compound having a particular radical, or group of specific compounds having a selection of particular radicals in your jurisdiction? In the analysis, does it matter how wide the prior disclosed generic class of compounds is – i.e. would the analysis be different if the prior disclosed generic class consisted of 1,000,000 possible compounds (very few of which were specifically disclosed) as opposed to merely, say, 10?

According to case law of the German Federal Court of Justice ("Bundesgerichtshof") and German Federal Patent Court ("Bundespatentgericht"), the invention in Example 1 is novel. Example 1 falls into the category "selection from a group of chemical compounds which are disclosed by a chemical structural formula".

In Example 1 the state of the art is determined inter alia by substituent R, which embraces all alkyl or aryl radicals. Because there is an indefinite number of such alkyl or aryl radicals, the simply reference of this group does not constitute prior publication prejudicial as to novelty with regard to a specific alkyl or aryl radical. If a chemical substance is given a general name this can be prejudicial to the novelty of its sub-groups. However this is not the case if this general nature of the name means that a person skilled in the art does not realise that this specific sub-group is meant. Thus, if a chemical compound is only given a general name – as is the case with all alkyl and/or aryl radicals, of which there is an indefinite number – this does not disclose all individual specific alkyl and/or aryl radicals. The more alkyl and/or aryl radicals that exist, the less likely a person skilled in the art will be able to discover the specific sub-group using the general name.

Q8  Inventive step or non-obviousness

In example 2 would any of the three possibilities constitute an inventive step over the prior art in your jurisdiction? Further, if, say, scenario (iii) does constitute an inventive step over the prior art, what scope of protection should the inventor be able to obtain? Should the inventor be able to obtain protection for the products per se (that happen to
have this advantageous property), or should any patent protection available be limited to the use of the products for the advantageous property (as an adhesive) not possessed by, and not obvious over the prior art?

Example 2: In the selection that the inventor has made in example 1, i.e. specific compound having a particular radical, or group of specific compounds having a selection of particular radicals, the resulting compounds may be:

(i) neither described as having nor shown to possess any advantageous properties (as adhesives) not possessed by specific prior art examples;

(ii) described as possessing advantages properties compared with the compounds specifically referred to in the prior art, but these properties are ones which the person skilled in the art would expect such compounds to possess, so that he is likely to be led to make this selection; or

(iii) described as having advantages (adhesives) properties but there are no indications which would lead the person skilled in the art to this particular selection as opposed to any other members of the generic class in order to achieve the advantageous (adhesives) properties.

If one assumes that the subject described in Example 1 is novel the following will be the case:

(i) does not entail an inventive step. A selective invention is only based on an inventive step if the selection is not obvious to a person skilled in the art on the basis of the state of the art. The selected range or the selected sub-group does not possess any particularly advantageous and/or surprising effect and/or property. Thus, (i) is merely an arbitrary selection of an individual sub-group which does not possess any advantageous effect and is hence not inventive.

(ii) does not entail an inventive step either. However, although the selective sub-group has a particularly advantageous effect, this is obvious to the skilled person.

(iii) does entail an inventive step. Here the selected sub-group has a particularly advantageous effect which is not obvious to a person skilled in the art according to the state of the art. Thus the selection was not obvious to the skilled person. In (iii) it is only possible to protect the specific use of the sub-group.

Q9 Sufficiency and/or written description requirements

To what extent are all members of the class selected by the patentee required to possess the requisite advantage in your jurisdiction? Is there an absolute requirement that all of the selected class possess the relevant advantage, or is the patentee excused if one or two examples fall short?

Sufficiency of disclosure within the meaning of German patent law does not require all alkyl and/or aryl radicals which possess a particularly advantageous effect to be named individually. It is sufficient for the sub-group of the alkyl and/or aryl radicals which have this effect to be disclosed as such. However, if individual and/or aryl radicals of the disclosed sub-group do not possess these effects there is no inventive step.
Q10 **Infringement**

By reference to example 3 to what extent is evidence of the knowledge of the advantageous property of the selection, or intention of the infringer as to its supply, required to find infringement in your jurisdiction?

Example 3: In the selection that our inventor has made, the claim extends to the use of a particular compound arising from a selection as an adhesive (where the adhesive nature of the compound is the advantageous property not possessed by the prior disclosed generic class of compounds). A competitor manufactures the claimed compound and supplies it with no instructions as to its use.

This is not a patent infringement under German law.

If only the specific use of a substance is protected by the selective invention, under German law simply offering and/or manufacturing the substance which is suitable for this purpose is not a literal infringement of patent law. Further, a use patent is not infringed literally if a third party which has manufactured and/or offered the substance knew of the advantageous use or intended to use the substance later for the protected use. A patent has only been infringed if the third party acts so as to prepare the substance appropriately. Appropriate preparation covers actions which make it clear that the product is suitable for the protected use. For example, there is a literal patent infringement if the instructions for use state that the product may only be used for the purpose protected by patent. The mere fact that the instructions for use do not expressly issue a warning stating that the product may not be used for purposes for which it has not been patented, cannot per se constitute a literal patent infringement. There is only a duty to state that a certain use would constitute a patent infringement if this follows from the principles of contributory patent infringement.

Q11 **Policy**

Groups are asked to consider, in respect of example 1 / 2, whether it matters how much effort the inventor has invested in arriving at his selection in order to found a valid selection patent. The answer to this question is closely related to the policy considerations that underpin the grant of selection patents and the incentive / reward equation involved. The inventor may have expended considerable time and money in trawling through the whole host of possible compounds encompassed by the prior disclosed generic class, and the particular selection that he has made may constitute a leap-forward in the field. Surely the inventor should be rewarded for his efforts and obtain protection? On the other hand, it could be argued that such considerations may have been relevant in an age when the inventor's efforts actually involved many man-years of careful and painstaking laboratory work, but are now increasingly irrelevant in an age of combinatorial synthesis when large varieties of different compounds can be manufactured in a fraction of the time. Are such considerations relevant?

In Germany it has been traditionally irrelevant, how much effort an inventor has spent in order to find the invention. A sudden inspiration is as patentable as the result of difficult thoughts. Different from US-patent law, which determines in accordance with the “written description requirement” to what extend at the time the invention was made the inventor had invented what is claimed, in accordance with German patent law it is not the subjective view oft he inventor which is decisive, but the objective view of the skilled expert, i.e. a third party. Legal certainty for the public is an important

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1 35 U.S.C. 112, Paragraph 1
aspect in Germany, and avoid for the inventor (oriented at the extend of the effort spent) is less decisive. The skilled reader of a published patent application shall be able to rely on his assumption, that only those subject matters can be patented, which he understands upon reading the application. The same criterion is valid with respect to the analysis of the state of the art. Everything what an expert understands upon reading a prior art document cannot be subject of a patent. This criterion is also valid for selection inventions.

The thoughts which are raised within this question are indeed irrelevant in Germany.

**Harmonisation**

**Q12** Groups are asked to analyze what should be the harmonized standards for the patentability of selection inventions. In particular, the items discussed in Q1-Q6 and the examples discussed in Q7-Q10 above should be referred to.

The German group AIPPI believes that the German Federal Court of justice has been right in not establishing a special dedicated case law for selection inventions. If a selection from a larger interval, which is known in the art, may be new or not, is to be determined upon the criterion, if an expert would have acknowledged the selection within the larger interval without thinking, if he has been looking for a solution to a particular technical problem.

The German group AIPPI is of the opinion that a selection is known from a previously published larger interval if an expert upon studying the prior art publications had acknowledged the selection as a solution of the underlying technical problem with thoughts, which are oriented at an implied object and its solution.

**Q13** Groups are also asked to recommend any issues for harmonization not referred to in Q11 above.

The German group AIPPI believes that the before mentioned summarized criterion in accordance with the German case law provides a basis for harmonization.

**Q14** Groups are asked to outline any other potential issues that merit discussion within AIPPI as regards selection inventions.

The German group AIPPI has no further suggestions in this respect.

**Summary**

German law does not have any specific criteria for the patentability of inventions which according to the working guidelines are “selection inventions”. An invention is considered to be novel if its subject matter does not form part of the state of the art at the priority date. It depends on the understanding of the person skilled in the art whether a selection invention forms part of the state of the art in the light of a more general prior teaching comprising the selection invention. A selection is based on an inventive step if, having regard to the state of the art, it is not obvious to a person skilled in the art.
The contrast thereto, the European Patent Office has developed specific criteria for the patentability of selection inventions. However, the German Group is of the opinion that the German Federal Supreme Court very rightly has not developed specific case law for selection inventions.

Résumé

La loi allemande ne connaît pas de critères particuliers à l’égard de la brevetabilité des inventions qui sont des « inventions de sélections » selon les directives de travail. Une invention est considérée comme nouvelle si son objet n’est pas compris dans l’état de la technique à la date de priorité. Qu’une invention de sélection fasse partie ou non de l’état de la technique au vue d’un enseignement antérieur plus générale comportant l’invention de sélection dépend du point de vue de l’homme du métier. Une sélection est basée sur une activité inventive si celle-ci ne peut pas être déduite par l’homme du métier de façon évidente de l’état de la technique.

Au contraire, l’Office européen de brevets a établi des critères particuliers pour la brevetabilité des inventions de sélection. Or, le group allemand considère que la Cour fédérale de justice allemande a raison de n’avoir pas établi la jurisprudence particulière en ce qui concerne les inventions de sélection.

Zusammenfassung


Im Gegensatz dazu hat das Europäische Patentamt spezielle Kriterien für die Patentfähigkeit von Auswahlerfindungen entwickelt. Die Deutsche Landesgruppe ist allerdings der Auffassung, dass der deutsche Bundesgerichtshof zu Recht für Auswahlerfindungen keine spezielle Rechtsprechung geschaffen hat.