Questions

General

Groups are asked to give a summary of the legal position as regards a 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 fields?

The expression “selection invention” is used for a selection of specific dimensions, ranges of values or parameters within (prior) larger areas based on new characteristics and properties which have not been known. “Selection inventions” are considered to be synonymous for “improvement inventions”.

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?

State of the art for a selection invention is usually a generic case wherein one or more larger parameters are disclosed whereas the selection relates to a smaller area within the large parameter range. If the selection, i.e. the subarea is not explicitly and quantitatively present in the state of the art then the selection is new. A generic formula can not anticipate the concrete newer embodiment.
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?

In order to be considered inventive a selection invention has to contain a new technical teaching. Surprising utilities and effects of the selection are a requirement. If only (obvious) alternative means for a certain embodiment, e.g. an apparatus, are used which are known for the same purpose no inventive step will be acknowledged. Likewise, the simple optimisation of parameters using known techniques in order to improve an earlier broader disclosure is not inventive.

In the chemical field the selection of a new compound of a general pre-disclosed formula is considered inventive if it is particularly valuable and surprising for the skilled man in the art. If the invention lies in the selection of new parameters the new parameter range has to relate to a new and unexpected advantageous effect in order to solve a specific goal. These effects are required to be restricted to the new inventive selected range. The new selected range has to directly correlate with the inventive and surprising effect.

Special additional criteria also exist that can indicate inventive step, e.g. if in the state of the art the selection has actually been discouraged.

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?

Since selection inventions are particularly required to show a surprising effect over the broad generic prior art it is necessary to support these effects in the application. A generalisation over the effective area is not allowed. It is advisable that the application contains a sufficient disclosure to support the complete new inventive range. If however the application only contains one specific example, e.g. only one chemical compound, there is a risk that a broader generic expression would be considered to lack support. Although, a generalisation is possible over specific examples, the claimed range should at least plausibly relate to the new inventive effect.
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?

With regard to literal infringement, showing that the infringement of the third party embodiment also has the inventive effect is not necessary. Literally falling within the claimed scope is sufficient. However, lack of the inventive effect might compromise patentability resulting in (partial) nullity of the patent if challenged in nullity proceedings. Regarding equivalent infringement, a third party embodiment which does not have the inventive effect is very unlikely to fall into the area of equivalence.

If a new use is claimed by the selection invention the granted patent will only cover said use. The manufacturer of a product that may be used for the new use does not infringe as long as he does not participate in indirect infringement (e.g. promoting the product for said patented use). Indirect infringement is a case wherein the intention of a producer may play a role in determining infringement.

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.

Selection inventions reward and promote further developments without diminishing a prior broader teaching and the earlier specialized examples (which must not be comprised in the younger selection invention). A selection invention is always an isolation of a specific noteworthy characteristic (or combination of some characteristics), that may be similar or even more surprising than the discovery of the prior broader field. Both, the generic older and the selected younger embodiments may contain an inventive achievement which is to be rewarded by a patent.

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?
The selection of a specific compound would be considered novel over the generic class of radicals as long as the specific compound is not contained in the prior disclosure. For the analysis of novelty alone it does make no difference how many compounds are contained in the prior disclosure - however this might be relevant for inventive step. Also sometimes in newer decisions a tendency can be felt to include an “inventive step influence” when evaluating novelty similar to the European practice: in case of a selection of a parameter range a selection invention should be distinctively apart from the prior disclosed parameter values.

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?

(i) Without a new effect and thus without a new surprising technological development the selection will be considered obvious over prior art.

(ii) The advantageous effect need to be surprising and if the effect of the selection is foreseeable and predictable from prior teaching the selection would be considered obvious.

(iii) Only those effects which relate to certain claim features can support inventive step. If those effects can also be traced back to features of the prior art of the generic class, these effects do not support inventive step. The simple discovery that the prior generic disclosure as a whole has an unknown advantageous effect does not render an (artificial) selection non-obvious.

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?

In the case of selection inventions which require surprising effects in a specific range of values, generalisations outside of the area for which the surprising effects are disclosed in the specification are not supported. A requirement to restrict the claims to only those embodiments for which the new effects have been shown is likely. If obvious examples (embodiments without the advantageous effect) fall within the claim range the whole claim becomes obvious. Sufficient support of the whole claim scope is more a matter of inventiveness than of sufficiency of disclosure and written description requirements where it is generally agreed that it is possible that the effects of a whole range may become plausible from a limited set of examples.
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?

In example 3 a competitor manufactures the claimed product as such and although no instructions for its (new) use have been supplied the products as such may fall into the claim scope of product claims. However, if only the use is claimed the competitor would not infringe the patent by simple provision of a product. Also since no instructions are supplied no indirect infringement will apply.

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?

The necessity for a selection invention to show a new surprising contribution over the art does not suffer or benefit from any specific methods used to arrive at the invention. Therefore it is of little consequence if the selection invention was made due to laborious research, a stroke of luck or genius. Still, evidence of long laborious work in order to arrive at the invention might support the position that the selection is indeed non-obvious starting from prior art.

Harmonisation

Q12 Groups are asked to analyse what should be the harmonised 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.

Q13 Groups are also asked to recommend any issues for harmonisation not referred to in Q11 above.
Q13 Groups are asked to outline any other potential issues that merit discussion within AIPPI as regards selection inventions.

The Austrian standard for selection invention is very close to the European practise which is well streamlined and accepted. One difference lies in the distinction between novelty and inventive step wherein the European standard for novelty contains some requirements of non-obviousness ("qualitative novelty"). In Austria the separation between novelty and inventive step is stricter distinguished but also with some European influence, e.g. novelty may also require that the selection is distinctively apart from prior disclosure example values. Further European influences in Austria might be expected. Nevertheless, to obtain a clearer view on novelty and inventive step it would be beneficial if the influence of inventive step into the area of novelty would be limited or avoided.

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