

## INVENTIVE STEP

The Australian Patents Act, subsection 7(2) states that ‘an invention is taken to involve an inventive step when compared with the prior art base unless the invention would have been obvious to a person skilled in the relevant art in the light of the common general knowledge as it existed (whether in or out of the patent area) before the priority date of the relevant claim, whether that knowledge is considered separately or together with the information mentioned in subsection (3)’. Subsection 7(3) states that this can be ‘(a) any single piece of prior art information; or (b) a combination of any 2 or more pieces of prior art information that the skilled person ...could, before the priority date of the relevant claim, be reasonably expected to have combined.’

According to IP Australia’s Patent Manual of Practice & Procedure at 2.5.1.1., ‘Examiners must consider the issue of inventive step in the context of the person skilled in the relevant art, in the light of the common general knowledge, trying to solve a predetermined problem...For an inventive step objection to apply, it must be established that the prior art information (if any) would be relied upon by a person seeking a solution to the problem, and that any consideration of the common general knowledge with that prior art information would be obvious to that person.’

## HINDSIGHT REASONING

In Australia, the dangers of hindsight or *ex post facto* analysis has been discussed in decisions of the High Court, where the question of obviousness was framed in terms of the problem facing the notional skilled addressee, and whether the application ‘lacked inventive ingenuity because the solution would have been obvious to any person of ordinary skill in the art who set out to solve the problem’ (*HPM Industries Pty Ltd v Gerard Industries Ltd* 98 CLR 424, 437 Williams J). This problem-solution approach is favoured as a way to reduce the risk of hindsight reasoning. This requires the determination of the problem to be solved and, in the context of that problem, (i) the skilled addressee, (ii) what prior art could be combined and what the relevant common general knowledge of the skilled addressee is, and (iii) whether the solution would be obvious in light of this.

In the first instance, the problem to be solved is typically inferred from the description as a whole, and is often discernible from stated prior art difficulties that the claimed invention seeks to overcome. The person skilled in the art is then identified in light of the problem, not the claimed solution, and is a skilled, but non-inventive, worker in the relevant field, knows the common general knowledge of the art, and could be a multi-disciplinary team (*Root Quality Pty Ltd v Root Control Technologies Pty Ltd* 49 IPR 225, *American Cyanamid v Ethicon Ltd* [1979] RPC 215 and *Sunbeam Corp v Morphy-Richards (Aust) Pty Ltd* (1961) ALJR 212).

## COMMON GENERAL KNOWLEDGE

In *Minnesota Mining & Manufacturing Co v Beiersdorf (Australia) Limited* (1980) 144 CLR 253 Aickin J stated (at 292) that common general knowledge ‘involves the use of that which is known or used by those in the relevant trade. It forms the background knowledge and experience which is available to all in the trade in considering the making of new products, or the making of improvements in old, and it must be treated as being used by an individual as a general body of knowledge’. It has been established that this is not restricted to material

that might be memorised, but also includes material that is known to exist and which would be referred to routinely, such as standard texts and tertiary sources, and periodicals specific to the field (*ICI Chemicals & Polymers Ltd v Lubrizol Corp* 45 IPR 577). It is also accepted that common general knowledge does not have to be ‘within the conscious awareness’ of the skilled addressee, as there would be publications that would be habitually consulted, but not memorised, but which would still be part of common general knowledge. However, ‘[w]hat might be found by a diligent searcher is not the same as “common general knowledge”’ (*Aktiebolaget Hassle and Astra Pharmaceuticals Pty Limited v Alphapharm Pty Ltd* 51 IPR 375 at [72]-[73]). It has also been said that being ‘widely read’ and ‘widely circulated’ is not sufficient for something to be common general knowledge, but that it has to be ‘generally known ... by the bulk of those who are engaged in the particular art; in other words, when it becomes part of their common stock of knowledge relating to the art.’ (*British Acoustic Films Ltd v Nettlefold Productions* (1936) 53 RPC 221 at 250). In general, individual patent specifications are not considered to be common general knowledge (*General Tire & Rubber Company v Firestone Tyre and Rubber Company Ltd* [1972] RPC 457 at 482).

Under Australian law, it is possible to find an application lacks an inventive step in light of common general knowledge alone (*Minnesota Mining & Manufacturing Co v Beiersdorf (Australia) Limited* (1980) 144 CLR 253).

Under the *Patents Act*, common general knowledge is not restricted to Australia.

#### PROBLEM INVENTION

An inventive step can occur where: the problem was known; the cause of the problem was unknown at the priority date, and the inventor has identified the cause of problem. According to *Wellcome Foundation Pty Ltd v VR Laboratories (Aust) Pty Ltd* (1981) 148 CLR 262 at 281 (Aickin J), ‘the perception of the true nature of the problem was the inventive step which, once taken, revealed that straightforward experiments will provide the solution’. Where the invention lies in identifying the true nature of the problem, this must be clear from the specification (*Winner & Anor v Ammar Holdings Pty Ltd* 24 IPR 137 at 141). If the nature of the problem would be obvious to the skilled addressee, then an inventive step cannot lie in the discovery of the problem (*Winner & Anor v Ammar Holdings Pty Ltd* 25 IPR 273 at 295). If the prior art discusses the nature of the problem, then no inventiveness can lie in the alleged discovery of the problem.

#### SECONDARY INDICIA

Where the prior art or common general knowledge teaches away from the claimed solution, an inventive step will exist, except where the prior art is readily identifiable as erroneous and correctable by the skilled addressee.

Where the solution may be obvious, but there were practical difficulties in implementing this, and the overcoming of the difficulties require an inventive ingenuity, then this can give rise to an inventive step. In contrast, according to *Tetra Molectric Ltd v Japan Imports Ltd* [1976] RPC 541, 581, if ‘any problems of design ... [relating to the implementation of the solution] ... would be easily solved by anyone skilled in the art ... the combination must be held to have been obvious.’

The existence of a prior perceived problem, and the length of this problem's existence, can be indicative of the existence of an inventive step in overcoming this problem.

However, in *Elconnex Pty Ltd v Gerard Industries* (1993) AIPC 90-984 it was stated that while these 'matters are of importance ... they are not conclusive ... In a case of doubt the existence of a long felt want and immediate imitation might well persuade a court ... But in the end one has to come to the question whether or not the claimed invention is obvious.' It was noted at first instance in *Elconnex Pty Ltd v Gerard Industries Pty Ltd* (1992) AIPC 90-848 that the failure to recognise a solution that is actually obvious might be because there no immediate commercial imperative for doing so, or because other solutions might be given preferential treatment. However, if a claim addresses a 'long felt need', there is a presumption that it is not obvious. As stated in *Lucas and Another v Gaedor Ltd and Others* [1978] RPC 297 at 358, "If an invention has resulted in the solution of a problem which has been troubling industry for years and achieves immediate success upon its introduction, then the suggestion after the event that the step was obvious inevitably rings a little hollow." If a problem has been the subject of previous failed attempts to solve it (*Technograph Printed Circuits Limited v Mills and Rockley (Electronics) Limited* [1972] RPC 346 at 353), or the solution was complex and laborious, involving 'a good deal of trial and error, with dead ends' and is not routine (*Aktiebolaget Hassle v Alphapharm Pty Ltd* (2002) 212 CLR 411), then an inventive step is likely.

Economic and production choices can give an indication of what is inventive, but care must be taken to avoid incorrectly conflating commercially strategic decisions with technical obviousness. In *Brugger & Ors v Medic-Aid Ltd* [1996] RPC 635 at 653-655, it was pointed out that an established manufacturer may elect to not take up a new type of technology as the costs of changing equipment would not be offset by the benefits of the improved product, whereas a new producer might not have such constraints. In determining "why something was not developed earlier", it is important to have regard to whether there was a motivation to look for a solution. Where a claimed invention has been taken up quickly and 'has been widely used, and used in preference to alternative devices [such as the prior art], it is ... practically impossible ... [to deny inventiveness] ... No evidence is more cogent of the success of the invention ... [than that it was copied]' (*Samuel Parkes & Co Ltd v Cocker Brothers Ltd* (1929) 46 RPC 241 at 248). In *Meyers Taylor Pty Ltd v Vicarr Industries Ltd* (1977) CLR 228 at 239, the High Court pointed to the copying of a claimed invention as demonstrative of a 'public need which is relevant to the question of obviousness', and that while commercial success can cannot be conclusive by itself, it is 'a material matter' that must be weighted 'by reference to all the surrounding circumstances.' In *General Tire & Rubber Company v Firestone Tyre and Rubber Company Ltd* [1972] RPC 457 at 503, commercial success was said to be 'a valuable weight in favour of the patent' on a case-by-case basis.

A bonus and unforeseen effect might give rise to an inventive step, but the mere presence of this bonus effect is not conclusive as the skilled addressee may have inevitably arrived at that solution by, for example, through merely using better material created by someone else for that use (*Asahi Kasei Kogyo KK v WR Grace & Co* (1992) AIPC 90-847 at 38,089).

#### CHEMISTRY SPECIFIC ISSUES

Where a prior art document discloses that certain compounds can be made by a certain reaction and suggests that other compounds could be made analogously, verification of this conjecture is not inventive (*Sharp & Dohme Inc v Boots Pure Drug Co Ltd* (1928) 45 RPC

153 at 192). A generic structural formula can deprive a later compound having a specific structure encompassed by the generic formula of an inventive step as similar properties are likely to result, and the verification that such a compound is suitable for the same purpose having been prepared in the suggested manner, is not inventive. In contrast, if the particular compounds cannot be prepared by the method of the prior art, then an inventive step will exist (*American Home Products Corporation Application* [1994] APO 58).

Where a racemic mixture is known for a specific use and the problem is to find a compound having that property in an enhanced level, or the same property with less side-effects, the question inevitably arises whether one of the isomers in isolation is an obvious solution. It is reasonable to presume that it is common general knowledge that one isomer is often more active than the other, although this is not always the case. The single isomer will be an obvious solution if it would have been a matter of routine to prepare the single isomer and test its activity. If the isomer is prepared by routine separation techniques, the single isomer will be an obvious solution. This is true even if it was not obvious beforehand which of the isomers would be more active (See *Rhone-Poulenc Rorer S.A.'s Application* [1995] APO 50).

## SELECTION PATENTS

In *Minnesota Mining & Manufacturing Co v Beiersdorf (Australia) Ltd* (1980) 144 CLR 253 at 293, it was said that ‘In the case of a combination patent the invention will lie in the selection of integers, a process which will necessarily involve rejection of other possible integers. The prior existence of publications revealing those integers, as separate items, and other possible integers does not of itself make an alleged invention obvious. It is the selection of the integers out of, perhaps many possibilities, which must be shown to be obvious.’

Where a solution is one of several alternatives, and there is not special inducement or reason for claiming that solution, and there is a surprising or unexpected advantage, then the solution is not obvious, as the skilled addressee would not be ‘directly led to the invention’ as per the High Court in *Aktiebolaget Hassle v Alphapharm Pty Ltd* [2002] HCA 59; (2002) 212 CLR 411.

Where the person skilled in the art would have adopted the particular solution, or chosen the particular selection, on the basis of a special inducement, and there is no practical difficulty in implementing the particular solution, or in producing the selection claimed, the claim lacks an inventive step. This is because the claimed solution is said to be ‘lying in the way ... [of] the ordinary route’ (*Elconnex Pty Ltd v Gerard Industries Pty Ltd* 105 ALR 247 at 262). It has been said that “Nothing ... would be more undesirable than that persons should be stopped ... from using materials which it is also established would lie readily to their hand, and would come to their mind as being likely materials to use” (*Philips (Bosgra's) Application* [1974] RPC 241 at 251).

A special inducement occurs where the prior art teaches towards the solution, when the common general knowledge teaches towards the solution, or teaches away from the other solutions; or when the other solutions are impractical. It is not necessary to show that success is certain or ‘clearly predictable’.

## SYNERGISM AND MIXTURES

Inventions which are mere admixtures cannot be patented. Under s50(1)(b), if the invention is a substance which is capable of being used as a food or medicine (whether for human beings or animals and whether for internal or external use) and is a mere mixture of known ingredients; or a process producing such a substance by mere admixture, the Commissioner can refuse to accept the application. A mere mixture of known ingredients is taken to mean a mixture exhibiting only the aggregate of the known properties of the ingredients.

Regardless of any potential interworking relationship between the integers, a mere admixture may mean that there is no inventive step if it would be obvious to combine the integers and the combination is simply 'the predictable use of prior art elements according to their established functions' (*KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 417) without a synergistic effect.

Conversely, if there is synergy, a potential working interrelationship or some other non-obvious advantage in combining the integers, then the admixture will not be obvious.