SUBMISSION TO IP AUSTRALIA

Amending the inventive step requirements for Australian patents

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1. INTRODUCTION AND SUMMARY

This submission is made in response to the invitation from IP Australia to provide feedback on options for implementing the Australian Government’s response to Recommendations 7.2 and 7.3 of the Productivity Commission (PC) Inquiry into Australia’s intellectual property arrangements that relate to the inventive step for patents. I am making this submission on my own behalf, and based upon my background and experience as a technologist (electrical engineer, software developer, and inventor), patent attorney, and IP consultant.

My submission may be summarised as follows.

- A difficulty with the PC’s Recommendations is that they are based upon some fundamental misconceptions regarding ‘European Patent Law’, and more particularly the differences between approaches taken within the European Patent Office (EPO), and the laws implemented within each member country of the European Patent Convention (EPC). The UK law is of particular interest, because of Australia’s shared common law heritage with the UK. I therefore provide a review of the EPO and UK approaches to inventive step.

- The approach to obviousness in the US is also instructive. Additionally, it may be desirable for Australia to take this opportunity to more closely align our law with that of New Zealand. I therefore briefly review the law of inventive step in these countries.

- The approach to inventive step under the Australian Patents Act 1990 is unique, and has been on a different track from the law in comparable jurisdictions since at least 1980. I provide a short history of the evolution of inventive step in Australia over this period.

- The PC has expressed concern about the ‘scintilla of invention’ standard, and the rejection of an ‘obvious to try’ test by the High Court of Australia. I argue that the problems with the level of inventive step cannot be addressed through raising the ‘scintilla’ standard – rather, the underlying bar for obviousness must be raised. Furthermore, with regard to this, and the ‘obvious to try’ test, the PC seems not to have appreciated that these features of judge-made law cannot be addressed merely by statements in an Explanatory Memorandum, in view of the common law doctrine of stare decisis. I am also not satisfied that the PC is correct in its apparent belief that there is a substantially more stringent test of ‘obvious to try’ in Europe, and consider that the US law may provide a better model. In two sections of this submission, I discuss the issues with the ‘scintilla’ standard, and with ‘obvious to try’.
• One thing that I believe becomes clear from the review of inventive step in Australia, and other jurisdictions, is that rigid, prescriptive approaches are undesirable, and have invariably led to the bar being set lower, rather than higher. I therefore take the opportunity to summarise the reform principles that can be gleaned from past experience.

• The PC’s desire to focus on ‘technical features’ of claims when assessing inventive step appears to be based on a belief that European law includes some additional obligation for applicants to expressly identify the technical features of their inventions, over and above other disclosure requirements. According to my understanding and experience of European patent law and practice, this is not true. There are, in my opinion, fundamental differences between European and Australian patent law that make it very difficult to simply ‘bolt on’ some form of ‘technical character’ requirement to the Patents Act 1990. This has implications for the PC’s recommendations that examination for novelty and inventive step focus on technical features of the claims, and that IP Australia compel applicants to explicitly identify the technical features of their claimed inventions. Two sections of this submission are therefore directed to a comparison of the approaches to ‘technical character’ in Europe and Australia.

• I conclude that the PC’s objective of raising the standard of inventive step in Australia can only be achieved through amendment of the Patents Act 1990, and that changes in practice and procedure at IP Australia and/or statements in Explanatory Memoranda would be of limited effect. Furthermore, in the absence of any basis in Australia law for examining claims for novelty and inventive step with respect to technical features, rather than according to the established principles of claim construction, it is likely to be impractical to fully implement the PC’s recommendations in this regard. Nonetheless, in many cases it may be possible for IP Australia to seek clarification regarding the technical features of a claimed invention as part of the ‘manner of manufacture’ evaluation.

• Finally, I provide a specific proposal for reform, in the spirit of the PC’s Recommendations, taking into account the various difficulties and limitations that I have identified. In an appendix, I also present model provisions to illustrate how the proposal may be put into effect.
2. EUROPEAN LAW ON INVENTIVE STEP

In my opinion, the single greatest obstacle to supporting any of the proposed options for implementing the PC’s Recommendations 7.2 and 7.3 is that they are based on fundamental misconceptions regarding the role of ‘technicality’ and the ‘problem-solution’ approach, at the EPO and in European patent law more generally. I therefore consider it necessary to clarify my own position on these matters before addressing the proposed options, and more practical alternatives.

Firstly, it is important to be clear on what I mean by ‘European patent law’. On one level, this refers to the provisions (‘Articles’) of the EPC, and of its implementing regulations (‘Rules’). In examining and granting European patents, the EPO is governed by, and applies the relevant provisions of, the EPC, as interpreted through its own practices and decisions of its Technical Boards of Appeal.

However, the EPC does not directly apply in each of the member states. Rather, each country implements the EPC through enactment of its own harmonised national law. Infringement and validity disputes are decided by national courts under their respective national patent laws, albeit guided by extrinsic considerations such as the Protocol on the Interpretation of Article 69 EPC1 (which is itself part of the EPC), the Directive on the Legal Protection of Biotechnology Inventions2 (an EU instrument), and the general desirability, and obligation of member states, to maintain their laws in harmony with one another, and with the EPO Technical Boards of Appeal.

Nonetheless, divergence of law, practice, and even outcomes can, and does, occur between EPC member states, and between individual member states and the EPO. In the following discussion, I provide examples of specific differences in the UK law that are pertinent to issues of patentable subject matter and inventive step. These are of particular relevance to Australia because, of course, like the UK (and unlike most of the other EPC member states) our legal system is based on the common law, including its principle of stare decisis. Despite the intention that the patent laws of EPC members be harmonised, therefore, the UK IPO and its lower courts are bound by decisions of higher UK courts, whether or not they are actually consistent with the EPC and/or EPO practice. In particular, as I shall explain, the UK courts and the UK IPO do not follow the EPO’s ‘problem-and-solution’ approach to the assessment of inventive step – which is not, in any case, mandated by the EPC.

2 https://ec.europa.eu/growth/industry/intellectual-property/patents/biotechnological-inventions_en

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Inventive Step at the EPO: ‘Problem-and-Solution Approach’

Article 56 EPC provides that:

An invention shall be 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.

The ‘state of the art’ pertinent to inventive step is defined in Article 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.

These provisions are reproduced in substantially identical terms in sections 3 and 2(2), respectively, of the UK Patents Act 1977.

As a matter of practice, the EPO employs a ‘problem-and-solution’ approach to the assessment of inventive step. This approach involves three main stages:

- determine the ‘closest prior art’, being ‘that which in one single reference discloses the combination of features which constitutes the most promising starting point for a development leading to the invention’;
- establish the ‘objective technical problem’ to be solved, which involves studying the application, the closest prior art and the difference, in terms of features (either structural or functional) between the claimed invention and the closest prior art, and identifying the technical effect resulting from these distinguishing features, to formulate the technical problem; and
- consider whether or not the claimed invention, starting from the closest prior art and the objective technical problem, would have been obvious to the skilled person, wherein ‘the question to be answered is whether there is any teaching in the prior art as a whole that would (not simply could, but would) have prompted the skilled person, faced with the objective technical problem, to modify or adapt the closest prior art while taking account of that teaching, thereby arriving at something falling within the

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7 Id., Section G.VII.5.1 ‘Determination of the closest prior art’, http://www.epo.org/law-practice/legal-texts/html/guidelines/e/g_vii_5_1.htm
8 Id., Section G.VII.5.2 ‘Formulation of the objective technical problem’, http://www.epo.org/law-practice/legal-texts/html/guidelines/e/g_vii_5_2.htm
terms of the claims, and thus achieving what the invention achieves" (emphasis in original).

The EPO's 'problem-and-solution' approach is thus an inflexible and formulaic process for assessing inventive step. The European examiner must find a single reference as the closest prior art, must consider the differences between the claimed invention and that single reference, and find the claimed invention to be obvious only if these particular differences, in light of the 'objective technical problem' and the teaching in the prior art as a whole, would (not merely could) have prompted the skilled person to arrive at the claimed solution.

As stated section I.D.2 of the EPO's Case Law of the Boards of Appeal, 'The problem and solution approach was primarily developed to ensure objective assessment of inventive step and avoid ex post facto analysis of the prior art.'

**Inventive Step in the UK: 'Windsurfing/Pozzoli Approach'**

In *Windsurfing International Inc. v Tabur Marine (Great Britain) Ltd* [1985] RPC 59 ('*Windsurfing*'), the UK Court of Appeal formulated a four-step approach to assessing obviousness:

1. identify the claimed inventive concept;
2. assume the mantle of the normally skilled but unimaginative addressee in the art at the priority date and to impute to him what was, at that date, common general knowledge of the art in question;
3. identify what, if any, differences exist between the matter cited as being 'known or used' and the alleged invention;
4. decide, assuming no knowledge of the alleged invention, whether these differences constitute steps which would have been obvious to the skilled man or whether they require any degree of invention.

More recently, in *Pozzoli SPA v BDMO SA* [2007] EWCA Civ 588, at [23], Jacob LJ reformulated the *Windsurfing* approach as follows:

1. (a) identify the notional 'person skilled in the art';
   (b) identify the relevant common general knowledge of that person;
2. identify the inventive concept of the claim in question or if that cannot readily be done, construe it;
3. identify what, if any, differences exist between the matter cited as forming part of the 'state of the art' and the inventive concept of the claim or the claim as construed;

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4. viewed without any knowledge of the alleged invention as claimed, do those differences constitute steps which would have been obvious to the person skilled in the art or do they require any degree of invention?

The rationale for this reformulation – which updates, but does not supersede, *Windsurfing* – is explained at [15]-[16] of *Pozzoli*:

- the first two steps of the *Windsurfing* approach must be conducted in the opposite order, ‘[f]or it is only through the eyes of the skilled man that one properly understand what such a man would understand the patentee to have meant and thereby set about identifying the concept’;
- the ‘first step actually involves two steps, identification of the attributes of the notional “person skilled in the art” (the statutory term) and second identification of the common general knowledge (“cgk”) of such a person.’

As Jacob LJ further proceeded to explain, in relation to step 3 (at [21]):

*Identification of the concept is not the place where one takes into account the prior art. You are not at this point asking what was new. Of course the claim may identify that which was old (often by a pre-characterising clause) and what the patentee thinks is new (if there is characterising clause) but that does not matter at this point.*

Being decisions of the Court of Appeal, the *Windsurfing/Pozzoli* approach is binding on the lower courts, and the UK IPO. In particular, it is the approach that is applied in examination of patent applications at the UKIPO.\(^\text{11}\)

It is notable that the *Windsurfing/Pozzoli* approach is significantly more flexible than the EPO ‘problem-and-solution’ approach. There is no requirement to identify a single reference as the ‘closest’ prior art – the ‘state of the art’ is considered as a whole. This is not an invitation to combine (or ‘mosaic’) prior art references indiscriminately, of course – the examiner, or other decision-maker, must still consider what would motivate the skilled person to combine information from different sources within the state of the art, and justify why it would have been obvious to do so. However, it is a considerably more holistic process than the rigid requirement to proceed from a single reference based upon an allegedly ‘objective’ technical problem imposed by the ‘problem-and-solution’ approach.

It may be that, in practice, the ‘problem-and-solution’ approach and the *Windsurfing/Pozzoli* approach produce the same result in a majority of cases. This does not, however, alter the fact that there is nothing in the EPC that mandates use of the ‘problem-and-solution’ approach. It is, in short, not ‘the law’ in Europe. It is especially clear that it is not the law in the UK.

3. OTHER JURISDICTIONS

United States of America

Section 103 of the US Patent Code requires that an invention, to be patentable, not be obvious to a person on ordinary skill in the relevant art. Specifically, 35 USC §103(a) provides that:

*A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.*

For decades, the US Court of Appeals for the Federal Circuit (CAFC), and its predecessor, the Court of Customs and Patent Appeals, applied a so-called ‘teaching-suggestion-motivation’ (TSM) test for the assessment of whether a claimed invention would be considered obvious in view of a combination of prior art references.\(^\text{12}\) However, in *KSR Intern. Co. v. Teleflex Inc.*\(^\text{13}\) the US Supreme Court reversed a decision of the CAFC based on the TSM test, ruling that while it ‘captured a helpful insight’, such insights ‘need not become rigid and mandatory formulas’ and ‘when a court transforms the general principle into a rigid rule that limits the obviousness inquiry, as the Court of Appeals did here, it errs.’\(^\text{14}\)

In *KSR* the Supreme Court reconfirmed ‘the need for caution in granting a patent based on the combination of elements found in the prior art’, noting that ‘[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.’\(^\text{15}\) The Court made clear that when considering obviousness of a combination of known elements, the operative question is ‘whether the improvement is more than the predictable use of prior art elements according to their established functions.’\(^\text{16}\)

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\(^{12}\) See, e.g., *In re Dance* 160 F. 3d 1339 at 1343: ‘To establish a *prima facie* case of obviousness based on a combination of the content of various references, there must be some teaching, suggestion or motivation in the prior art to make the specific combination that was made by the applicant.

\(^{13}\) 127 S.Ct. 1727 (2007); 550 U.S. 398

\(^{14}\) *Id.* at 1741

\(^{15}\) *Id.* at 1739

\(^{16}\) *Id.* at 1740
New Zealand

Section 7 of the New Zealand Patents Act 2013 provides that:

An invention, so far as claimed in a claim, involves an inventive step if it is not obvious to a person skilled in the art, having regard to any matter which forms part of the prior art base.

Subsection 8(1) defines the relevant ‘prior art base’ as follows:

For the purpose of deciding … whether or not an invention involves an inventive step, the prior art base, in relation to an invention so far as claimed in a claim, means all matter (whether a product, a process, information about a product or process, or anything else) that has at any time before the priority date of that claim been made available to the public (whether in New Zealand or elsewhere) by written or oral description, by use, or in any other way.

Accordingly, other than substitution of the term ‘prior art base’ (adopted from the Australian Patents Act 1990) in place of ‘state of the art’, the law in New Zealand is substantially based on that of Europe and the UK. Assessment of inventive step in the Intellectual Property Office of New Zealand (IPONZ) follows the UK Windsurfing/Pozzoni approach. Furthermore, the NZ Supreme Court had confirmed that the Windsurfing principles were applicable in opposition and revocation cases under the predecessor legislation, the New Zealand Patents Act 1953. The standard of inventive step (setting aside possible differences in the content of the prior art base) was therefore arguably higher in New Zealand than under the Australian Patents Act 1990 even prior to commencement of the 2013 NZ Act.

4. INVENTIVE STEP IN AUSTRALIA

Australia’s woes in relation to inventive step essentially began with the decision of the High Court in the 3M case – a blow from which, it can fairly be said, the law has never fully recovered. The 3M decision established that it was impermissible, under the Australian Patents Act 1952, to base an argument of obviousness upon prior publicly available publications, individually or in combination, without evidence that they had become part of the common general knowledge at the

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priority date.\textsuperscript{20} That approach was reconfirmed in 2000 by the High Court in the \textit{Omeprazole} case,\textsuperscript{21} in which the Court also rejected an ‘obvious to try’ approach to assessing inventive step.\textsuperscript{22}

Although \textit{3M} predated the UK \textit{Windsurfing} decision by five years, it is clear that from at least this point in time the law of inventive step in Australia diverged from that of the UK (and New Zealand). This divergence has not passed unnoticed by the UK courts.\textsuperscript{23}

Section 7 of the \textit{Patents Act 1990} was intended as an antidote to \textit{3M}. Recommendation no. 13 of the report of the Industrial Property Advisory Committee (IPAC) handed down in 1984 included as item (iii) that ‘the common general knowledge in the art be treated as including disclosures in recorded form publicly available anywhere in the world which a skilled person ... should reasonably have been expected to find, understand, and regard as relevant.’\textsuperscript{24} The Government rejected this recommendation, preferring instead to retain the concept of common general knowledge as developed by the courts. However, it accepted recommendation 13(ii), allowing an assessment of obviousness to be based on any single source of prior art information considered in the light of the common general knowledge, provided that a skilled person could ‘reasonably have been expected to find or uncover, understand and regard [the information] as relevant.’

The \textit{Review of Intellectual Property Legislation under the Competition Principles Agreement} (‘the Ergas report’) was delivered to the Government in 2000.\textsuperscript{25} The Ergas report concluded, with regard to patents, that the inventive threshold

\begin{thebibliography}{99}
\item Id. CLR at 294-295
\item Aktiebolaget Hässle v Alphapharm Pty Ltd (2002) 56 IPR 129; [2002] HCA 59, at [31]
\item Id. at [66]-[76]
\item See, e.g., Angiotech Pharmaceuticals & Anor v Conor Medsystems Inc [2007] EWCA Civ 5, at [43]: ‘It is perhaps noteworthy that currently Australian courts seem to be taking a very pro-patent view of obviousness and that patents are being upheld there which are not upheld elsewhere. The Hässle case and the Viagra case, Pfizer v Lilley (held by the Federal Court of Appeal non-obvious though invalid on other grounds) are perhaps examples of this. Whether, if that is so, it is good for the Australian economy is not my concern.’ (Per Jacob LJ.)
\item Industrial Property Advisory Committee, Patents, Innovation and Competition in Australia, A report to the Hon. Barry Jones, MP, Minister for Science and Technology, 29 August 1984, Recommendation 13.
\end{thebibliography}
required to obtain monopoly rights should be increased.\textsuperscript{26} Accordingly, the report recommended:\textsuperscript{27}

- that the relevant common general knowledge should not be restricted to the common general knowledge in Australia;
- that the prior art base for assessing inventive step should include acts done anywhere in the world; and
- that, when considering inventive step, it should be permissible to combine the disclosures in two or more items of prior art information, where such combination would be obvious to the skilled person.

As part of its ‘Innovation Action Plan’, the Government subsequently proposed amendments to the \textit{Patents Act 1990} that would not only have implemented the Ergas recommendations, but would also have removed the requirement that the skilled person would have ascertained, understood and regarded the information as relevant, which it considered would bring the Australian legislation into line with ‘international standards’, presumably referring to the corresponding provisions in foreign jurisdictions such as the US and Europe.

However, the (now defunct) Australian Democrats used their control of the balance of power in the Senate to oppose the amending items that would have expanded the scope of common general knowledge, and to retain the limitation in s 7(3) that prior art information for the purposes of assessing obviousness should be reasonably ascertained, understood and regarded as relevant.\textsuperscript{28} It was only through the passage of the \textit{Intellectual Property Laws Amendment (Raising the Bar) Act 2012} that these explicit barriers to the consideration of prior art were finally removed.

The difficulty with subsections 7(2) and (3) of the \textit{Patents Act 1990}, in their various incarnations, has always been the rigid, formulaic, and evidence-intensive approach that they impose upon the inquiry into inventive step. The most infamous example of this problem is the \textit{Emperor Sports} case,\textsuperscript{29} in which the alleged invention involved tear-off strips of material for use in touch Australian rules football and rugby games. The court found that the relevant ‘person skilled in the art’ was a football coach, who could not be expected to have found a prior

\textsuperscript{26} \textit{Id.}, p. 143: ‘The Committee is convinced that Australia would gain from ensuring, to a greater degree than is currently the case, that patents are not granted where it is likely that reasonable threshold tests for securing a valid patent will not be met.’
\textsuperscript{27} \textit{Id.}, p 156
\textsuperscript{28} See, e.g., Sen Natasha Stott Despoja (Australian Democrats, SA), \textit{Australian Senate Official Hansard} No. 14, 2001, Thursday 27 September 2001, pp 28193–4: ‘The expansion [of the prior art base] creates interpretive difficulties as patents could be knocked out if applicants were unfamiliar with, say, a Mongolian journal article … [and] goes beyond the Ergas review’s recommendations that knowledge should be limited to that which a skilled person could reasonably be expect to know, understand or find.’
\textsuperscript{29} \textit{Commissioner of Patents v Emperor Sports Pty Ltd} [2006] FCAFC 26
US patent document disclosing essentially the same invention, but described as
being for use in American football. As a result, the claims – which, other than the
identity and rules of the underlying game, were substantially directed to a pre-
existing invention – were found to be valid.

5. A ’SCINTILLA OF INVENTION’?

At a track and field event, if the high jump bar is set to a world record height, all
the athlete needs to do in order to enter the record books is to pass over without
dislodging the bar from its supports. On any given jump, an athlete may achieve
more height than necessary, but this is irrelevant. What matters is the height of
the bar, and whether it remains in-place after the jump. The rule is simple, and it
is certain. The winner of the event is the athlete who clears the highest bar.

It might be said that a ‘scintilla of clearance’ is all that is required. Yet even this
goes further than is necessary, because either the bar remains in place, or it does
not. The athlete can graze it, or can clear it by centimetres. Degree is irrelevant.

So it is with inventive step. What the law requires is that the invention, so far as
claimed in any claim, involves an inventive step. As with the high jump bar,
certainty and consistency in the application of the law requires that this be
assessed as objectively and consistently as possible. Absolutely, some inventions
may strike us as more insightful, significant, or extraordinary than others. Some
may even be the result of genius. But the role of the courts, and other decision-
makers, is not, and cannot be, to make subjective, quantitative evaluations of the
degree of inventiveness in any given case.

The PC observed that the High Court, in Aktiebolaget Hässle v Alphapharm Pty
Ltd30, ‘noted that the UK may require more than a scintilla.’31 In response to a
submission from the Institute of Patent and Trade Marks Attorneys of Australia
(IPTA) – which employed a similar analogy to mine above – the PC argued that ‘it
is important to recognise that a scintilla does not describe the amount by which a
pole vaulter must clear the bar. Rather, a scintilla sets the bar — and does so at a
level that even pole vaulters of questionable ability can clear.’32

Here, with respect, the PC is simply wrong. The bar is set by the criteria that
establish the standard against which the (binary) presence or absence of
inventive step is assessed. In the Australian law, these criteria are primarily the
level of ordinary skill and common general knowledge in the art (i.e. the qualities
of the person skilled in the art), the content of the relevant prior art base, and
the flexibility with which prior art information can be applied.

30 Supra, at [48]
31 PC Report, p 223
32 Id.
This is not merely my (or IPTA’s) opinion. The High Court’s *obiter dicta* were wrong in 2002, and the PC was wrong in 2016, regarding the position in the UK. As stated by Sir Donald Nicholls VC, sitting in the UK Court of Appeal in 1994:  

> Under [section 3 of the Patents Act 1977 (UK)] the criterion for deciding whether or not the claimed invention involves an inventive step is wholly objective. It is an objective criterion defined in statutory terms, that is to say whether the step was obvious to a person skilled in the art having regard to any matter which forms part of the state of the art as defined in section 2(2). **We do not consider that it assists to ask whether 'the patent discloses something sufficiently inventive to deserve the grant of a monopoly'.** Nor is it useful to extract from older judgments expressions such as 'that scintilla of invention necessary to support a patent'. The statute has laid down what the criterion is to be: **it is a qualitative not a quantitative test.** (Emphasis added.)

It is not, therefore, that the UK requires ‘more than a scintilla’. Rather, it is that the UK courts have long recognised that any notion of ‘degree’ of invention is irrelevant.

Accordingly, if we wish to raise the standard of inventive step without introducing undesirable subjectivity and uncertainty into the law, we must look to the criteria that actually establish an objective bar of inventiveness, including the characteristics of the person skilled in the art (PSA). Presently, the law in Australia holds little regard for the PSA, who was most recently described by the High Court (French CJ) in the following terms:

> The notional person is not an avatar for expert witnesses whose testimony is accepted by the court. It is a pale shadow of a real person — a tool of analysis which guides the court in determining, by reference to expert and other evidence, whether an invention as claimed does not involve an inventive step.

In the US, the equivalent of the PSA is accorded somewhat greater respect. As the Supreme Court stated in *KSR*: ‘A person of ordinary skill is also a person of ordinary creativity, not an automaton.’

6. ‘OBVIOUS TO TRY’

The PC has rightly observed that in *Aktiebolaget Hässle v Alphapharm Pty Ltd* the High Court rejected an ‘obvious to try’ approach to inventive step under

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33 *Möllycke AB v Procter & Gamble Ltd (No 5) [1994] RPC 49 at 112*

34 *AstraZeneca AB v Apotex Pty Ltd [2015] HCA 30 at [23]*

35 *KSR, supra* at 1742
Australian law in favour of a ‘routine steps’ test, i.e. whether the skilled person ‘would have taken as a matter of routine whatever steps might have led from the prior art to the invention’, or ‘would ... directly be led as a matter of course to try [those steps] in the expectation that it might well produce’ a solution to the problem at hand.

The PC appears to be of the view that European law includes a more stringent ‘obvious to try’ test that would be suitable for adoption in Australia in some instances. However, it is far from clear that there is any uniform approach in this regard across Europe, or that the tests that are applied are significantly different in outcome to the Australian approach.

The high-water-mark for ‘obvious to try’ in the UK may have been *Brugger and others v Medic-Aid Ltd*36 (in which Laddie J held that if a particular route is an obvious one to try, it is not rendered any less obvious from a technical point of view merely because there are a number, and perhaps a large number, of other obvious routes as well) and *Bristol-Myers Squibb Co v Baker Norton Pharmaceuticals Inc*37 (where Jacob J held that an effect which was revealed by following the obvious course of action did not make the action non-obvious). However, since these decisions it is at least arguable that the UK courts have reined-in the scope of the ‘obvious to try’ test.

In *Saint-Gobain PAM SA v Fusion Provida Ltd and Electrosteel Castings Ltd* 38 the Court of Appeal held that the mere possible inclusion of something within a research programme on the basis you will find out more and something might turn up is not enough to show obviousness. In particular, Jacob LJ observed that ‘the “obvious to try” test really only works where it is more-or-less self-evident that what is being tested ought to work.’39 In *Conor Medsystems Inc v Angiotech Pharmaceuticals Inc & Ors* Lord Hoffmann (with whom Lord Scott, Lord Walker, Baroness Hale, and Lord Neuberger agreed) confirmed that the notion of something being obvious to try was useful only in a case where there was a fair expectation of success.40

On the other hand, the US Supreme Court in *KSR* shifted the law relating to ‘obvious to try’ in the opposite direction:41

*When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options...*
within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense. In that instance the fact that a combination was obvious to try might show that it was obvious under § 103.

Accordingly, if it is deemed desirable that the Australian law incorporate an ‘obvious to try’ test with the objective of raising the standard of inventive step, as matters now stand the US appears to provide a better model for a flexible approach than Europe and the UK.

7. INVENTIVE STEP SUMMARY: PRINCIPLES FOR REFORM

If there is a theme that emerges from the foregoing brief review of laws relating to inventive step in Europe, the UK, the US, New Zealand, and Australia, it is surely this:

- laws and practices that impose a rigid and formulaic approach to the assessment of obviousness are ‘bad’, in the sense that they tend to foreclose consideration of the context in which advancement of human knowledge and capability occurs, resulting, in at least some cases, in patents claiming advances of low innovative merit being granted and upheld;
- laws and practices that permit an expansive and flexible approach to the assessment of obviousness are preferable, because they enable courts and other decision-making bodies to take account of inferences and steps that a person skilled in the art would employ, and avoid granting or maintaining patent protection for advances that would occur in the ordinary course without real innovation;
- the law should, as far as possible, establish objective criteria for assessing obviousness, so as to avoid introducing undesirable subjectivity, uncertainty, and inconsistency into decision-making.

Amendment of the Patents Act 1990 to raise the standard of inventive step, in the spirit of the PC’s Recommendation 7.2, should take account of the experience in Australia and elsewhere, and embody the principle that ‘less is more’. In particular, where specific approaches have been enshrined in legislation, or imposed by courts or rule-making authorities, the result has invariably been that a lower, rather than higher, standard of inventiveness is required for a valid patent. Similarly, efforts to impose subjective and/or quantitative criteria into the law are misplaced, and have the potential to produce unintended and undesirable outcomes.
8. THE REQUIREMENT FOR ‘TECHNICAL CHARACTER’ IN EUROPE

Rule 43(1) EPC\(^{42}\) requires that ‘claims shall define the matter for which protection is sought in terms of the technical features of the invention…’. It should be noted, however, this is not a mechanism for the EPO to request applicants to explicitly identify technical features. Rather, it is a rule regarding the required content of a patent claim. As stated in section F.IV.2.1 of the \textit{EPO Guidelines for Examination}:

\begin{quote}
The claims must be drafted in terms of the "technical features of the invention". This means that claims should not contain any statements relating, for example, to commercial advantages or other non-technical matters, but statements of purpose should be allowed if they assist in defining the invention.\(^{43}\)
\end{quote}

Rule 43(1) is drafted in the context of Article 52(1) EPC,\(^{44}\) which provides that ‘European patents shall be granted for any inventions, in all fields of technology, provided that they are new, involve an inventive step and are susceptible of industrial application.’ As noted by the EPO Board of Appeal in T 0154/04 (Estimating sales activity / DUNS LICENSING ASSOCIATES),\(^{45}\) ‘[h]aving technical character is an implicit requisite of an “invention” within the meaning of Article 52(1) EPC (requirement of “technicality”).’

The absence of any specific obligation for the applicant to identify technical features of the invention is also clear from section I.D.2 of \textit{Case Law of the Boards of Appeal}\(^{46}\):

\begin{quote}
The problem-solution approach does not require that the application specify what feature is responsible for producing precisely what advantage or technical effect …. All that is required for inventive step is that the claimed subject-matter is not obvious to the skilled person in the light of the prior art’ (citations omitted).
\end{quote}

Accordingly, there is no provision of the EPC, or its implementing Rules, authorising the EPO to impose any special or additional obligation upon applicants to identify technical features of an invention, in the claims or otherwise. Rather, it is simply the case that a claim that does not recite any technical features cannot be an “invention” within the meaning of the EPC. This is, therefore, a question of subject matter, rather than inventive step.

\(^{46}\)Supra.
It is true, however – and particularly pertinent to cases involving excluded subject matter defined by Article 52(2) EPC – that non-technical features recited in claims are disregarded by the EPO for the purposes of assessing inventive step (see EPO Guidelines Section G.VII.5.4 ‘Claims comprising technical and non-technical features’). Accordingly, under the EPC as it is interpreted by the EPO, questions of subject matter and inventive step become, at least to this extent, intermingled. Doubtless, this is the origin of the PC’s contention that, in Europe, tests for novelty and inventive step ‘are based only on the technical features in the claims.’

9. THE ROLE OF ‘TECHNICAL CHARACTER’ IN AUSTRALIA

In Australia, the question of subject matter is addressed through the ‘manner of manufacture’ test in section 18(1)(a) of the Patents Act 1990. In contrast to the ‘mixed’ approach of the EPO, the High Court of Australia has been very clear that all grounds of invalidity under the Patents Act 1990 are distinct.

It should be noted, firstly, that the ‘manner of manufacture’ test, as it has been developed by the courts in Australia, already excludes a range of ‘non-technical’ subject matter, e.g. ‘[b]usiness, commercial and financial schemes as such have never been considered patentable.

However, the Australian courts have also shown a reluctance to fall back on a general ‘technological arts’ test for patent-eligibility. As the Full Court noted in Grant:

One thing that stands out from NRDC is the emphasis that their Honours put on the unpredictability of the advances of human ingenuity. What is or is not to be described as science or technology may present difficult questions now, let alone in a future which is as excitingly unpredictable now as it was in 1623 or 1959, if not more so. We think that to erect a requirement that an alleged invention be

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48 PC Report, p 223
49 See, e.g., Lockwood Security v Doric Products [2004] HCA 58; 217 CLR 274, at [48]: ‘Each of the grounds of invalidity referred to in ss 18(1)(a), 18(1)(b)(i), 18(1)(b)(ii) and 18(1)(c) is distinct from the others. Thus there is a "logically precise" and "fundamental" difference between the objection for want of novelty and the objection for want of an inventive step. The lack of inventive step ground of invalidity is distinct from all the others...’ (citations omitted). It is also notable that the UK courts employ a different approach from that of the EPO in assessing subject matter eligibility, which avoids mixing considerations of subject matter and inventive step, i.e. the so-called ‘Aerotel/Macrossan test’: Aerotel Ltd v Telco Holdings Ltd & Ors Rev 1 2007 RPC 7.
50 Grant v Commissioner of Patents [2006] FCAFC 120, at [14]
51 Id. at [38]
within the area of science and technology would be to risk the very kind of rigidity which the High Court warned against.

Furthermore, if a claim is directed to a manner of manufacture, there is no basis or authority in Australian law for then focusing specifically on ‘technical features’ for the purposes of assessing novelty and/or inventive step. The principles of construction are well-established, and include:\textsuperscript{52}

- in approaching the task of construction, one must read the specification as a whole;
- a patent specification should be given a purposive construction rather than a purely literal one;
- too technical or narrow construction of claims should be avoided.

10. IMPLEMENTING THE PC’S RECOMMENDATIONS

The first element of the PC’s Recommendation 7.2 is essentially that subsections 7(2) and (3) of the \textit{Patents Act 1990} be amended along the lines of the EPC, UK and New Zealand provisions. This is relatively straightforward.

However, the Recommendation goes further, and proposes that:

a) the Explanatory Memorandum should state
   - a ‘scintilla’ of invention, or a scenario where the skilled person would not ‘directly be led as a matter of course’, are insufficient thresholds for meeting the inventive step
   - the ‘obvious to try’ test applied in Europe would in some instances be a suitable test; and

b) IP Australia should update the Australian Patent Office Manual of Practice and Procedure such that it will consider the technical features of an invention for the purpose of the inventive step and novelty tests.

Additionally, The PC’s Recommendation 7.3 is that IP Australia should reform its patent filing processes to require applicants to identify the technical features of the invention in the set of claims.

These further elements of the PC’s recommendations are problematic. Statements in an Explanatory Memorandum and changes in Patent Office practice cannot override substantive judge-made law. There are two aspects to the inventive step test: firstly, establishing the factual background, including the characteristics of the PSA, the relevant content of the prior art, and the claimed invention; and, secondly, comparing the invention with the prior art to determine whether the step(s) required to span the differences is/are obvious.

\textsuperscript{52} See, e.g., \textit{Pfizer Overseas Pharmaceuticals v Eli Lilly} [2005] FCAFC 224
While the PC’s proposed amendment to section 7 would reform the first aspect of the test, it is not apparent that it would alter the meaning of the word ‘obvious’ that has been developed by the courts. In the absence of actual legislative action, it is likely that lower courts would continue to consider themselves bound by established High Court authority, particularly in relation to the application of the ‘routine steps’ test, and rejection of ‘obvious to try’.

Similarly, introducing an obligation that an invention be ‘technical’, whether directly or via the back-door of requiring that it be claimed in technical terms, clearly requires legislative change to the substantive requirements for validity of a patent. With regard to the as it law currently stands in Australia, the courts have refused to declare that ‘the realm of human endeavour in which patents may be granted can be defined positively as that of science and technology’. IP Australia has no authority to impose any additional ‘technicality’ obligations on applicants. Any attempt to do so would ultimately be subject to challenge in the Federal Court, which would almost certainly be successful based upon existing High Court and Full Federal Court authority.

Legislating to introduce a ‘technical features’ requirement, however, is itself fraught with risk. Any such legislation would be globally unique. As I have explained, the requirement for ‘technical character’ in Europe is considered to be inherent in the EPC. The scheme, and history, of the Australian Patents Act 1990 is completely different, and incompatible with any simple amendment.

A ‘technical features’ requirement in section 40, for example, would potentially conflict with the existing ‘manner of manufacture’ test where, for example, some new path of human endeavour is found to be patent-eligible, but cannot be claimed in terms of what we might conventionally regard as ‘technical features’. The courts’ efforts (including that of the High Court in the celebrated NRDC case) to preserve flexibility in the test for patentable subject matter – which have been expressly endorsed by successive governments by maintaining the ‘manner of manufacture’ test in the Australian Patents Act – could thus be effectively thwarted. The relationship between subject matter and ‘technical features’ would therefore need to be considered in drafting any amendment, with a view to avoiding unintended consequences.

Furthermore, legislating a focus on ‘technical features’ would cast into doubt the continuing application of long-established and stable law in relation to the construction of patent specifications. This would create considerable uncertainty for patentees, applicants, and the wider public, since it would likely be many years before any cases involving the new provisions reached the superior courts, and possibly decades until the revised law reaches the existing level of maturity and stability.

53 Grant, supra at [35]
11. PROPOSAL

The overarching objectives of the PC in making its recommendations 7.2 and 7.3 are to raise the standard of inventive step in Australia, and to ensure that examiners are provided with sufficient information to properly search and evaluate claimed inventions under the revised law.

In view of the concerns discussed above, I believe that these objectives will be most effectively achieved in practice by:

- repealing the existing subsection 7(1) to 7(3) and replacing them with provisions based upon those of the EPC, UK, or New Zealand laws;
- substituting the term ‘prior art base’ in the Patents Act 1990 with ‘state of the art’ (mirroring the European terminology) to emphasise the break that is being made with the Patents Act 1990 as originally enacted;
- deleting the definition of ‘prior art base’ from the Dictionary in Schedule 1, and incorporating the definition of the ‘state of the art’ into section 7;
- also incorporating into section 7 a list of factors that are to be considered, on a case-by-case basis, in assessing whether or not a claimed invention is obvious, including the level of ordinary skill and creativity in the relevant art, and the applicability of an ‘obvious to try’ test.

A model version of section 7 is attached as Appendix A in order to illustrate how this proposal might work.

The Explanatory Memorandum should then explain that it is intended that the UK Windsurfing/Pozzoli approach be applied in establishing the factual background to the obviousness enquiry, and that the US KSR approach be considered, in appropriate cases, when assessing obviousness.

With regard to the identification of technical features, under Australian law I consider that this is more appropriately addressed as a clarification of Patent Office examination practice in relation to the ‘manner of manufacture’ enquiry, rather than under inventive step. If an examiner is unable to identify the subject matter of the invention from the specification and claims, with sufficient clarity and certainty to identify whether or not the claims are patentable, they should be authorised to reserve further search and examination until the applicant resolves the deficiency, either by proposed amendment to the specification and/or claims, or by the submission of additional explanation of the patentable (i.e. typically technical) features of the invention.
APPENDIX: MODEL PROVISIONS

Section 7: Novelty and inventive step

(1) An invention, so far as claimed in any claim, is novel if it does not form part of the state of the art.

(2) 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 Patent Area or elsewhere) by written or oral description, by use or in any other way.

(3) The state of the art in the case of an invention to which an application for a patent or a patent relates shall be taken also to comprise matter contained in a complete specification filed in respect of an application for another patent if all of the following circumstances apply:
   a) if the information is, or were to be, the subject of a claim of that complete specification, the claim has, or would have, a priority date earlier than that of the claim under consideration; and
   b) that complete specification became open to public inspection after the priority date of the claim under consideration; and
   c) the information was contained in that complete specification on its filing date and when it became open to public inspection.

(4) An invention, so far as claimed in any claim, involves an inventive step if it is not obvious to a person skilled in the art, having regard to any matter which forms part of the state of the art by virtue only of subsection (2) above (and disregarding subsection (3) above).

(5) If a person is required by this Act to decide whether an invention, so far as claimed in any claim, is not obvious to a person skilled in the art, the person making the decision must have regard to:
   a) the common general knowledge, level of ordinary skill, and level of ordinary creativity of the person skilled in the art; and
   b) where the invention provides a solution to a problem, whether there is, within the capacity of the person skilled in the art, a finite number of identifiable paths leading from the state of the art to the solution, and whether the person skilled in the art would consider the prospects of success in pursuing any, or each, one of those paths to be sufficiently high that it would be obvious to try to arrive at a solution via that path.