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1. Introduction

Australia has traditionally been viewed as a patentee-friendly jurisdiction, though the legal landscape continues to evolve as the effects of a revised Patents Act start to play out at the Patent Office (IP Australia) and the Australian Federal Court, together with frequent, rigorous analysis by the courts of the stalwarts of patent law – patentability, novelty and inventive step. In the biotechnology and pharmaceutical fields, much attention has been given to the emerging impact of the revised Patents Act (which entered into force in April 2013) and its new, raised standards for patent specifications to meet in providing a sufficient disclosure of the invention across the entire scope of the claims. Otherwise, various quirky Australian provisions such as those relating to the ‘promise’ of the invention or the obtaining of a patent by false suggestion or misrepresentation continue to trap the unaware.

Within the evolving legal landscape, the fundamental question of patentability remains an important topic for consideration. The Australian Patents Act 1990 retains a distinct, overarching provision for patentability, which is that a patentable invention must be a ‘manner of manufacture’ as that term is used in the old UK Statute of Monopolies 1623.¹ This requirement has been interpreted by the Australian courts over many decades, resulting in a suite of case law that elaborates on this archaic statutory provision.

In the fields of computer-implemented inventions and business methods, the mere recitation of computer implementation in the claims used to be sufficient to comply with the manner of manufacture requirements. However, following the Australian Full Court Federal rulings in *Research Affiliates LLC v Commissioner of Patents* [2014] FCAFC 150 (*Research Affiliates*) and *Commissioner of Patents v RPL Central Pty Ltd* [2015] FCAFC 177 (*RPL*), the threshold for patent eligibility has been significantly raised, particularly for computer-implemented business methods. And although computer-implemented business methods where the invention lies in the computerisation are still considered patentable subject matter, there has been much uncertainty and flux in the approach taken by IP Australia in assessing the patent eligibility of such inventions.

1 Patents Act 1990, Section 18(1)(a).

In the biotechnology and pharmaceutical arenas, the question of patentability is somewhat clearer. Since the Australian High Court ruling in *D'Arcy v Myriad Genetics Inc* [2015] HCA 35 (*Myriad*) that 'isolated' nucleic acids are unpatentable by virtue of the substance of the claim (the genetic sequence information) being a naturally occurring phenomenon despite the form of the claim (with its 'isolated' limitation) attempting to suggest otherwise, IP Australia has settled into a reasonably predictable practice in reading *Myriad* narrowly. Thankfully, the impact of the Australian *Myriad* decision on the biotechnology industry has not been significantly detrimental. In addition, the Australian courts have confirmed that diagnostic methods remain patentable, including those carried out on the human body. These developments serve to reinforce the distinction between Australia's patent-friendly stance in the biotechnology and pharmaceutical fields and the decidedly more challenging environment in the United States.

2. Electrical and computer arts

2.1 Case law summary – key factors in assessing inventions for patentable subject matter

Over recent years, the Full Court of the Federal Court of Australia has endorsed a two-step test for assessing patent eligibility of computer implemented inventions as depicted in Figure 1.

In particular, it has been recognised that even if the subject matter of a claim is a computerised scheme, the invention may nonetheless reside in the computerisation or implementation of that scheme and be patent eligible.

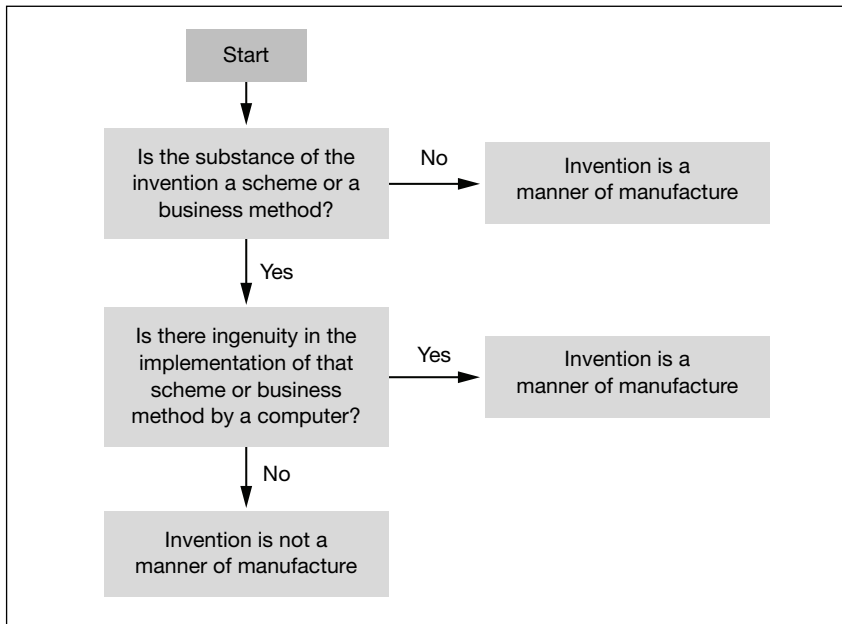
In *Research Affiliates*,² the claims of the application under consideration were directed towards a computer-implemented method for generating an index for use in securities trading which involved a computer being used to receive data associated with assets and apply a weighting to each of the assets to generate the index.

The Full Court noted that the substance of the invention as described in the specification was directed towards the index itself, and although the inventors created an algorithm to gather, process and manipulate the data to cause the computer to generate the index, such algorithms were not 'foreign' to the normal use of computers; there was no technical contribution to the invention or artificial effect of the invention by reason of the intervention of the inventors.

The Full Court held that mere recitation of computer implementation in the claims was not sufficient to render a business method patentable and accordingly, the invention was not a manner of manufacture.

2 *Research Affiliates LLC v Commissioner of Patents* [2014] FCAFC 150.

Figure 1. Patent eligibility of computer-implemented inventions



Nonetheless, the Full Court did recognise that a computer-implemented business method or scheme can be patentable if there is some ingenuity in the way in which the method or scheme is carried out in the computer. Taking note of key decisions from other jurisdictions, including the judgment by the Court of Appeal of England and Wales in *Aerotel Ltd v Telco Holdings Ltd; Macrossan's Application* [2006] EWCA Civ 1371 (*Aerotel*), and the judgment by the United States Supreme Court in *Alice Corp v CLS Bank International*, 573 US 208 (2014), the Full Court set out some key factors for consideration in assessing an invention for patentable subject matter holistically, including:

- whether the contribution to the claimed invention is technical in nature;
- whether the invention solves a 'technical' problem within the computer or outside the computer, or whether it results in an improvement in the functioning of the computer, irrespective of the data being processed;
- whether the claimed method merely requires generic computer implementation;
- whether the computer is merely the intermediary, configured to carry out the method using a computer-readable medium containing program code for performing the method, but adding nothing to the substance of the idea; and
- whether the ingenuity is in the physical phenomenon in which the

effect may be observed and which has the requisite economic utility or artificial effect, rather than in the scheme.

In RPL,³ the invention under consideration by the Full Court involved gathering evidence relevant to an assessment of an individual's competency relative to a recognised qualification standard.

The Full Court sought to identify the substance of the invention to determine where the inventiveness or ingenuity of the inventors resides, and accordingly, whether the claimed invention involved a manner of manufacture. At [96] the Full Court notes:

A claimed invention must be examined to ascertain whether it is in substance a scheme or plan or whether it can broadly be described as an improvement in computer technology. The basis for the analysis starts with the fact that a business method, or mere scheme, is not, per se, patentable. The fact that it is a scheme or business method does not exclude it from properly being the subject of letters patent, but it must be more than that. There must be more than an abstract idea; it must involve the creation of an artificial state of affairs where the computer is integral to the invention, rather than a mere tool in which the invention is performed. Where the claimed invention is to a computerised business method, the invention must lie in that computerisation. It is not a patentable invention simply to "put" a business method "into" a computer to implement the business method using the computer for its well-known and understood functions.

In doing so, the Full Court found the claimed steps of retrieving the criteria from the server, presenting the questions to a user and receiving responses to the questions to be commonplace computer functions that merely reflect the normal use of a computer. The substance of the invention was therefore deemed to be the idea or scheme and not the actual implementation of the idea by the computer. Accordingly, the Full Court held that invention was not a manner of manufacture.

More recently, in *Commissioner of Patents v Rokt Pte Ltd* [2020] FCAFC 86 (*Rokt*), the Full Court again applied the two-step test to consider whether a computer implemented method for linking a computer user to an advertising message by way of an intermediate engagement offer to drive higher engagement with an advertising message was a manner of manufacture. Ultimately, the Full Court held that the substance of the invention was a 'marketing scheme', which relied on computing hardware and software only for their "well-known and understood functions", as "a vehicle for implementing the scheme", and that the claimed invention was patent ineligible.

3 *Commissioner of Patents v RPL Central Pty Ltd* [2015] FCAFC 177.

2.2 The role of prior art and expert evidence

Akin to the approach taken by the United Kingdom Intellectual Property Office (UKIPO) following the *Aerotel* decision, IP Australia had adopted the ‘contribution test’ for assessing inventions for patentable subject matter; that is, identifying the substance of the invention as being the actual contribution to the prior art. The application of the ‘contribution test’ thereby necessitates a direct comparison of the claimed invention with the prior art, arguably conflating the distinct requirements of novelty and inventive step with manner of manufacture. The appropriateness of this enquiry was considered in two recent decisions: *Encompass Corporation Pty Ltd v InfoTrack Pty Ltd* [2019] FCAFC 161 (*Encompass*) and *Rokt*.

In *Encompass*, the Full Court considered whether the primary judge erred in finding that a computer-implemented invention which merely involved a concatenation of three known methods did not provide an improvement in the computer and was therefore patent ineligible.

Although the Full Court chose not to emphatically reject this approach as illegitimate, it suggested that in inquiring whether the claimed method results in an improvement in the computer, the primary judge was not seeking to import any particular test into his consideration; he was instead searching for patentable subject matter by reference to a “touchstone of such subject matter”.⁴ However, the Full Court did endorse the view that manner of manufacture is a conceptually distinct element of patentability, referencing a similar caution set out in *CCOM Pty Ltd v Jiejing Pty Ltd* (1994) 51 FCR 260⁵ and reiterated in *Research Affiliates*.⁶

In *Rokt*, the Full Court reversed the primary judge’s decision, which had found that although the invention solved a business problem, that being how to attract the attention of a user and have that user choose to interact with an advertiser, it also solved the technical problem of how to use computer technology to address the business problem. Notable was a heavy reliance placed by the primary judge on expert evidence submitted by the two parties, particularly in determining what constituted prior art at the priority date of the application.

The Full Court decided that the primary judge was mistaken in relying on expert evidence for a manner of manufacture determination and clarified that the role of expert evidence in such circumstances is limited to familiarising the court with the state of the art at the priority date, assisting the court in construing the meaning of words that are terms in the art, and explaining technical concepts relevant to understanding the invention. It emphasised that

4 *Encompass Corporation Pty Ltd v InfoTrack Pty Ltd* [2019] FCAFC 161, at [109], [110] and [113].

5 *CCOM Pty Ltd v Jiejing Pty Ltd* (1994) 51 FCR 260 at [291].

6 *Research Affiliates LLC v Commissioner of Patents* [2014] FCAFC 150 at [111].

it is fundamentally a matter for the court to determine and characterise the invention.

The Full Court further clarified that the role of the common general knowledge in the manner of manufacture assessment is limited to allowing for an informed construction of the specification so the substance of the invention can be identified.

2.3 Mechanisms of a particular construction

In *Aristocrat Technologies Australia Pty Limited v Commissioner of Patents* [2020] FCA 778 (*Aristocrat*), the claims under consideration were directed towards an electronic gaming machine (EGM), which includes a combination of physical parts and computer software to produce a particular outcome in the form of gameplay.

The Court found the substance of the invention to be “a mechanism of a particular construction, the operation of which involves a combination of physical parts and software to produce a particular outcome in the form of an EGM that functions in a particular way”. The Court determined that this combination of features work together to provide a particular outcome, distinguish the claims from being a scheme and therefore bring the claims into the realm of patentable subject matter. It was therefore unnecessary to consider the second step of the test (whether there was ingenuity).

This decision contrasts with earlier Patent Office decisions for similar subject matter, such as *Aristocrat Technologies Australia Pty Limited* [2017] APO 1, where the substance of the invention was instead considered to reside in the game play.

The *Aristocrat* decision was appealed to the Full Court of the Federal Court of Australia, and a decision is expected to be handed down imminently.

2.4 IP Australia practice

Following the *Encompass* and *Rokt* decisions, the Australian Patent Examiners' Manual was updated and no longer directs Examiners to apply the ‘contribution test’ when assessing inventions for a manner of manufacture. Instead, and as shown recently in *Jagwood Pty Ltd* [2020] APO 38, IP Australia is assessing inventions for a manner of manufacture by focusing on the key factors set out in *Research Affiliates*, with a greater weighting being placed on whether the invention is technical in nature.

Computer-implemented inventions that merely rely on generic computing hardware, and that do not provide a technical improvement, tend to be objected to by IP Australia as not being patent eligible.

However, if the computer-implemented invention improves computing technology, or uses non-standard computing hardware in a new and useful way, it may be possible to have IP Australia recognise the patent eligibility of such

inventions. To maximise chances of success, it is advisable to include, in the description of a patent specification, technical details of the mechanisms that achieve the specific implementation and emphasise the technical advantages over generic implementations. The invention should also be characterised to a sufficient degree in the claims to distinguish it from generic computer implementations.

On other hand, where it can be demonstrated that the invention solves a technical problem in a technical way, it is likely that the invention will be considered patent eligible by IP Australia. To assist in demonstrating the technicality of the claimed invention, it is helpful to include in the description specific examples of technical difficulties that were overcome in implementing the technology, along with any particular technical effects or advantages provided by specific features of the invention.

And, as has been demonstrated recently in *Aristocrat*, computer-implemented inventions that include software claim features that work in tandem with specialised hardware to provide a new and useful result, such as a mechanism of a particular construction, may be considered patentable subject matter.

This is an extract from the chapter 'Australia' by Steve Gledhill and Madeleine Kelly in Patent Subject Matter Eligibility: A Global Guide, published by Globe Law and Business.