Grant v Commissioner of Patents and patenting knowledge inventions

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This article reviews the Full Federal Court decision in Grant v Commissioner of Patents (2006) 154 FCR 62; 69 IPR 221; [2006] FCAFC 120 denying patentability to a method for structuring a financial transaction so as to protect an individual’s assets from a loss of ownership as a result of a legal liability. The article challenges the distinctions drawn by the Full Federal Court and argues that the decision marks a new development in setting a boundary for the Patents Act 1990 (Cth) “manner of manufacture”. The article concludes that important questions now arise in assessing the possible application of the Patents Act 1990 (Cth) to promoting some inventions (and innovations) and not others, and whether there are other classes of inventions that also do not require the Patents Act 1990 (Cth) incentives.

INTRODUCTION

The decision of the Full Federal Court in Grant v Commissioner of Patents (2006) 154 FCR 62; 69 IPR 221; [2006] FCAFC 120 provided important guidance on what may not be patentable under the Patents Act 1990 (Cth) (Patents Act). It now seems unlikely that the matter will be considered by the High Court, leaving the Full Federal Court decision as a benchmark authority for the proposition that some potentially significant financial innovations (and other electronic products and processes) may not be patentable. While Grant’s invention was claimed as an “innovation patent”, it seems likely that the same statutory words appearing for both the provision for “standard patents” and “innovation patents” in the Patents Act will be interpreted to have the same or similar meanings, giving the precedent of this decision wider and more important application. It is for this reason that a close analysis of the reasoning is necessary and some consideration of the likely limits of the decision are worthy of further assessment.

Earlier analysis has challenged the present formulation of the threshold subject matter questions (“manner of manufacture”) for both “standard patents” and “innovation patents”, and articulated a practical and generally applicable “public interest” ground to limit patentability. The purpose of this article is to review the different reasoning adopted by the Federal Court (trial judge) and the Full Federal Court in concluding that Grant’s invention was not a “patentable invention” for the purposes of the Patents Act. This is significant as there appears to be some uncertainty in the various reasons relied on by the Federal Court justices. Perhaps more importantly, the decision is a benchmark that is likely to significantly affect the patentability of inventions that rely on the synthesis and application of data and information products and processes (knowledge inventions) by significant sectors of industry, such as lawyers, financial planners, accountants and so on, and more broadly those providing

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1 Patents Act 1990 (Cth), s 62 and Sch 1.

2 Patents Act 1990 (Cth), s 61 and Sch 1.

3 Notably, this is not always the case. For example, the term “invention” in the context of the Patents Act 1990 (Cth), s 18, means “invention” for which a patent may be granted while the term “invention” in the context of the Patents Act 1990 (Cth), s 40(2), means “the embodiment which is described, and around which the claims are drawn”: see Kimberly-Clark Australia Pty Ltd v Arico Trading International Pty Ltd (2001) 207 CLR 1 at 15 (Gleeson CJ, McHugh, Gummow, Hayne and Callinan JJ).

professional advice services, such as medical practitioners, teachers, management consultants and so on. This is critical as an exclusion of these inventions from the incentive mechanisms of a utilitarian patent system (under the Patents Act) might be expected to undermine future valuable inventions in these industry sectors. Alternatively, the absence of such incentives in these sectors challenges the necessity of such incentives in other sectors. The following sections address the background to the litigation, an overview of the reasoning of the Federal Court and Full Federal Court, and an analysis of these decisions, and a brief conclusion that the Full Federal Court decision raises important policy questions for what inventions in the increasingly important service sector of the economy deserve Patents Act incentives.

BACKGROUND TO THE LITIGATION

The alleged “patentable invention” in issue was a method for structuring a financial transaction so as to protect an individual’s assets from a loss of ownership as a result of a legal liability. The primary claim was:

An asset protection method for protecting an asset owned by an owner, the method comprising the steps of:

(a) establishing a trust having a trustee,
(b) the owner making a gift of a sum of money to the trust,
(c) the trustee making a loan of said sum of money from the trust to the owner, and
(d) the trustee securing the loan by taking a charge for said sum of money over the asset.

The innovation patent had been examined by the Deputy Commissioner of Patents (as a delegate of the Commissioner of Patents; Grant’s Application [2004] APO 11), determined to be invalid and revoked on the ground “that the invention, so far as claimed, does not comply with paragraph 18(1A)(a)” (at [1], [28]). Before the Deputy Commissioner the threshold criteria of “novelty” and “innovative step” were not in issue (at [10]-[15]). The Deputy Commissioner had concluded (at [28]):

The invention does not result in an artificially created state of affairs – the state of affairs was already present in the laws of Australia. The claimed invention is therefore not for a manner of manufacture within the meaning of s 6 of the Statute of Monopolies, and a ground of revocation has been made out … Additionally, there is nothing in the description that indicates any basis for amending the claims to overcome this conclusion.

As a matter of statutory construction of the Patents Act this required a determination by the Deputy Commissioner that:

• The alleged invention was an “invention” for the purposes of the Patents Act – that is, “any manner of new manufacture the subject of letters patent and grant of privilege within s 6 of the Statute of Monopolies” (emphasis added).

• The alleged invention “does not comply with [s] 18(1A)(a)” - that is, “is [not] a manner of manufacture within the meaning of s 6 of the Statute of Monopolies”.

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5 Australian Innovation Patent 2003100074, Asset Protection Method, Stephen John Grant, 26 May 2004, Claim 1. There were other independent claims that varied from Claim 1 “in manners such as specifying that the asset is real property located in Australia; the trust being a non-offshore trust; specifying a mortgage rather than a charge; not requiring equivalence of the gift, loan, and charge; and the trustee being controlled by the owner” and one dependent claim with “the additional requirement that the trust has no default beneficiaries”.

6 See Patents Act 1990 (Cth), s 209.

7 See Patents Act 1990 (Cth), s 101B(2)(b).

8 Patents Act 1990 (Cth), s 18(1A)(b)(i); the equivalent requirement for a “standard patent”: s 18(1)(b)(i).

9 Patents Act 1990 (Cth), s 18(1A)(b)(ii); the equivalent requirement for a “standard patent”: s 18(1)(b)(ii).

10 Patents Act 1990 (Cth), Sch 1.

11 Patents Act 1990 (Cth), s 18(1A)(a). Notably this may also require an assessment of the context of s 18(1A)(a) where the chapeau provides that “an invention is a patentable invention for the purposes of an innovation patent if the invention, so far as claimed in any claim” necessitating that the manner of manufacture be both a “patentable invention” and an “invention” as defined in the Patents Act 1990 (Cth), Sch 1.
The interpretation of these statutory terms, however, has wider application as the statutory provisions in s 18 of the *Patents Act* establish a threshold for both a “standard patent” (s 18(1)) and an “innovation patent” (s 18(1A)).

an invention is a patentable invention for the purposes of … [a standard patent / an innovation patent] … if the invention, so far as claimed in any claim: (a) is a manner of manufacture within the meaning of s 6 of the *Statute of Monopolies*. A “patentable invention” is defined to mean “an invention of the kind mentioned in s 18”. The term “invention” is defined to mean:

any manner of new manufacture the subject of letters patent and grant of privilege within s 6 of the *Statute of Monopolies*, and includes an alleged invention.

The following sections set out an analysis of the Federal Court (trial judge) and Full Federal Court decisions.

**The Federal Court’s (trial judge) decision**

Branson J’s decision in the Federal Court in *Grant v Commissioner of Patents* (2006) 67 IPR 1; [2005] FCA 1100 was directed to the terms “is a manner of manufacture within the meaning of s 6 of the *Statute of Monopolies*” (s 18(1A)(a) (and s 18(1)(a) for “standard patents”)) and not to the chapeau requirement of an “invention”, being “any manner of new manufacture the subject of letters patent and grant of privilege within s 6 of the *Statute of Monopolies*” (at 3, emphasis added).

Branson J considered that the High Court in *National Research Development Corp v Commissioner of Patents* (1959) 102 CLR 252 at 269 (NRDC) “made it clear that the true question to be answered” was “[i]s this a proper subject of letters patent according to the principles which have been developed for the application of s 6 of the *Statute of Monopolies*?” (at 3). This, Branson J suggested, meant (at 3):

In seeking to identify the principles which have been developed for the application of s 6 of the *Statute of Monopolies*, it is not to be overlooked that the High Court in *NRDC* … also said that “any attempt to state the ambit of s 6 of the *Statute of Monopolies* by precisely defining ‘manufacture’ is bound to fail”. It would therefore be wrong to see *NRDC* itself as intending to define a manner of manufacture as, or as including, a method that has as its end result an artificially created state of affairs of economic significance … The language used by the High Court in *NRDC* is to be understood in the context of the subject matter under consideration in that case.

Branson J was able to conclude that a “principle” developed for the application of s 6 of the *Statute of Monopolies* was “that the notion of what is patentable must remain flexible in order for patent law to keep pace with scientific and technological developments” (at 5). However, she did not rely on this principle, even though she expressed the view that “[t]here is nothing novel in the concept of structuring a financial transaction to achieve a desired outcome, such as the protection of financial assets” (at 5). Instead, Branson J identified the “principle” that (at 5):

an invention should only enjoy the protection of a patent if the social cost of the resulting restrictions upon the use of the invention is counterbalanced by resulting social benefits. This principle is derived from the theoretical justification for the grant of a patent, that is, the assumed value of inventive ingenuity to the economy of the country. The monopoly granted by a patent to an inventor is assumed to serve the public interest both by rewarding, and thus encouraging, inventive ingenuity and by ensuring the disclosure to the public of a new article or process.

**Notes and references**

12 The threshold standards have relevance for examination (standard patent: *Patents Act 1990* (Cth), s 45(1)(b) (including a “modified examination”: s 48(1)(a)); innovation patent: s 101B(2)(b)), opposition (standard patent: s 59(b); innovation patent: s 101M(b)), re-examination (standard patent: s 98(1) (pre-grant (s 97(1)) and post-grant (s 97(2) and (3))); innovation patent: s 101G(3) (post-grant)) and revocation (including as a counter-claim to infringement) (standard and innovation patents: ss 138(3)(b) (revocation) and 121(1) (counter-claim to infringement)).

13 *Patents Act 1990* (Cth), ss 18(1) (standard patent) and 18(1A) (innovation patent).

14 *Patents Act 1990* (Cth), Sch 1.

15 *Patents Act 1990* (Cth), Sch 1.
In support of this “principle”, Branson J distinguished her conception of a patent’s value and economic utility, rejecting the Deputy Commissioner’s perspective. The Deputy Commissioner ([2004] APO 11) appears to have rested his decision on the characterisation of the alleged invention as a “discovery” that “the effects of certain laws can be avoided by the pre-emptive taking of appropriate steps in accordance with other laws” (at [4]). The Deputy Commissioner then appears to have reduced the problem to separate questions of “economic utility” and an “artificially created state of affairs” that were distilled from the High Court’s decision in *NRDC* (at [19]-[24]). The Deputy Commissioner concluded that there was “economic utility” because “clearly there are many professional advisers in society charged with looking after their client’s assets by making full use of the law” (at [21]). Branson J therefore appears to be rejecting both the characterisation of the decision in *NRDC* as merely requiring “economic utility” and an “artificially created state of affairs”, and favouring a narrow conception of the *NRDC*’s “value to the country in the field of economic endeavour” (at 6):

> The economic utility identified by the Deputy Commissioner is not a utility of value to the country; it is a utility of value only to those whose assets are ultimately protected – and possibly to their professional advisers. The performance of the invention will not add to the economic wealth of Australia or otherwise benefit Australian society as a whole. For this reason, in my view, the invention of the subject of the patent is not a proper subject of letters patent according to the principles which have been developed for the application of s 6 of the *Statute of Monopolies*.

Branson J also expressed the view, as an “additional reason”, that paying debts was in the public interest and that this was an invention “by which the owner may be insulated from the operation of laws” only to advance private interests and not the broader public interests: “[t]he social cost of conferring on the invention the protection of a patent would therefore not be counterbalanced by any resultant benefit to the public” (at 6).

The consequence of Branson J’s decision was to dismiss the appeal and revoke the innovation patent (at 6).

**The Full Federal Court’s decision**

On appeal in the Full Federal Court in *Grant v Commissioner of Patents* (2006) 154 FCR 62; 69 IPR 221; [2006] FCAFC 120 Heerey, Kiefel and Bennett JJ, in a joint judgment, upheld the Federal Court’s decision (at 73; 231). However, the reasoning justifying the Full Federal Court’s conclusions was importantly different. The Full Federal Court clearly articulated that they did not find their decision on either “economic utility” (at 230) or the balance between social costs and public benefit (at 72; 230). For the Full Federal Court the issue to be resolved was “whether a method of asset protection consisting of actions of financial and legal consequence is properly the subject of letters patent” (at 64; 222). They identified that a threshold requirement of patentability was that the alleged invention “be a manner of manufacture” (at 64; 222) and looked to the High Court’s decision in *NRDC* (1959) 102 CLR 252 at 269 as “the basis for a determination of what is patentable” according “to the breadth of the concept and principles which the law has developed for the application of s 6 of the *Statute of Monopolies*” (at 64; 222) applied “flexibly” and “recognising that developments and inventions are ‘excitingly unpredictable’” (at 65; 223). After reviewing various authorities (in various jurisdictions) about the proposition that abstract ideas, methods of calculation and methods or schemes for carrying on a business are not patentable (at 65-69; 223-227), the Full Federal Court then

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16 This in itself is significant as the Full Federal Court in *CCOM Pty Ltd v Jiejing Pty Ltd* (1994) 51 FCR 260; 28 IPR 481 (Spender, Gummow, Heerey JJ) applied the principle from *NRDC* as requiring “a decision as to what properly and currently falls within the scope of the patent system” (at 291; 511) being “a mode or manner of achieving an end result which is an artificially created state of affairs of utility in the field of economic endeavour” (at 295; 514).


18 Citing as authority for this proposition *NV Philips Gloeilampenfabrieken v Mirabella International Pty Ltd* (1995) 183 CLR 655 at 663 (Brennan, Deane and Toohey JJ) and *Merck & Co Inc v Arrow Pharmaceuticals Ltd* (2006) 154 FCR 31 at 51-52; 68 IPR 511 at 529 (Heerey, Kiefel and Dowsett JJ).

concluded that “the courts have confirmed that a broad approach to subject matter should be taken in order to adapt to new technologies and inventions but that does not mean that there are no restrictions on what is properly patentable” (at 69; 227).

The question then was whether the alleged invention was properly patentable as a “manner of manufacture” (s 18(1A)(a)), and s 18(1)(a) for “standard patents”). Grant’s contentions that the alleged invention was a “manner of manufacture” were summarised by the Full Federal Court as (at 69; 227):

• The claimed invention has economic utility.
• The state of affairs created by the trust, the gift, the loan and the mortgage is an artificial state of affairs within the meaning of that expression in NRDC.
• The invention is the method by which an artificially created state of affairs is itself created.
• The artificial state of affairs is that financial rights and obligations have changed.
• If the result of the scheme is an artificial state of affairs with economic utility, the principles enunciated in NRDC and as developed for the application of s 6 of the Statute of Monopolies apply and the claimed invention is a proper subject of letters patent.
• The documents that create the scheme are not part of the claimed invention.
• It is conceded that there is no physical object or physical phenomenon as part of the invention but none is required.
• It is not suggested that there was a new combination or new working of the integers of the claim being the different arrangements that make up the scheme.
• The “useful, concrete and tangible result” of the invention is an alternative to accepted asset protection methods that enable people to trade.
• The invention is a new use of a known substance in which the substance comprises a trust, a gift to the trust and a loan of money secured by a mortgage in a new use or purpose.
• The Deputy Commissioner wrongly applied NRDC in a rigid and formulaic, rather than a flexible, manner.

In rejecting Grant’s contentions, the Full Federal Court clarified that a “product of a method is something in which a new and useful effect may be observed” and that even though a device was not necessary for a method claim, “[f]or claimed computer programs, the courts looked to the application of the program to produce a practical and useful result, so that more than ‘intellectual information’ was involved” (at 70; 228). The Full Federal Court then distinguished Welcome Real-Time SA v Catuity Inc (2001) 113 FCR 110; 51 IPR 327 (Catuity) saying (at 70; 228):

[T]he method of [the] patent does not produce any artificial state of affairs, in the sense of a concrete, tangible, physical, or observable effect. It is quite different from the invention in Catuity, which was a method involving components such as smart cards and point of sale terminals, and produced tangible results in the writing of new information to the Behaviour file and the printing of the coupon. While there was not a physically observable end result in the sense of a tangible product, the invention involved an application of an inventive method where part of the invention was the application and operation of the method in a physical device. Within the concept of NRDC an artificial state of affairs was produced, a state of affairs created by the application or effect of the method.

The Full Federal Court then stated (at 70-71; 228-229):

What Mr Grant’s method results in is at best[20] an abstract, intangible situation, namely that a hypothetical unsecured creditor who recovered judgment against a user of the method could not levy against the user’s assets to the extent they were subject to the charge … A physical effect in the sense of a concrete effect or phenomenon or manifestation or transformation is required. In NRDC, an artificial effect was physically created on the land. In Catuity and [CCOM Pty Ltd v Jiejing Pty Ltd (1994) 51 FCR 260; 28 IPR 481] as in [State Street Bank & Trust Co v Signature Financial Group Inc 149 F3d 1368 (Fed Cir 1998)] and [AT&T Corporation v Excel Communications Inc 172 F3d 1352 (Fed Cir 1999)], there was a component that was physically affected or a change in state or information in a part of a machine. These can all be regarded as physical effects. By contrast, the alleged invention is a mere scheme, an abstract idea, mere intellectual information, which has never been held to be patentable, despite the existence of such schemes over many years of the development of the principles that apply

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[20] Noting that the Full Federal Court said: “We say at best because the application of the Bankruptcy Act 1966 (Cth) preference provisions and the laws against fraudulent conveyances have not been considered in this litigation”: Grant v Commissioner of Patents (2006) 154 FCR 62 at 70; 69 IPR 221 at 228 (Heerey, Kiefel and Bennett JJ).
to manner of manufacture. There is no physical consequence at all. … We therefore conclude that, for reasons related to its operation and effect, Mr Grant’s alleged invention does not involve a manner of manufacture.

The Full Federal Court concluded that “[l]egal advices, schemes, arguments and the like are not a manner of manufacture” because they do not have the requisite “industrial or commercial or trading character” even though they might be “an area of economic importance (like the fine arts)” (at 71; 229). Further, the Full Federal Court cautioned against importing any requirement that patents be confined to fields “defined positively” as science and technology: “[w]e think that to erect a requirement that an alleged invention be within the area of science and technology would be to risk the very kind of rigidity which the High Court warned against [in NRDC]” (at 71; 229).

The Full Federal Court also addressed the use of a known product in the context of a “manner of new manufacture” (the chapeau requirement of an “invention”, being “any manner of new manufacture the subject of letters patent and grant of privilege within s 6 of the Statute of Monopolies”), albeit not presented in that way, and stated (at 71-72; 229-230):

In any event, it was not suggested that there was some specific interaction between the steps that effected a new working. Rather, the end result was effected by a mere taking of sequential steps, a collocation of integers rather than a new combination. Assuming novelty, the proposed scheme represents a new use of known products (a trust, a gift, a loan and a security) with known properties for which their known properties make them suitable (the creation of a structure of financial rights and obligations or even a change in the person’s legal circumstances). That is not the proper subject of letters patent.

The consequence of the Full Federal Court’s decision was to dismiss the appeal and confirm the revocation of the innovation patent (at 73; 231).

**DISCUSSION**

The Full Federal Court adjudication needs to be placed into the textual context of the *Patents Act* before its significance can be assessed. As set out above, the courts were assessing whether the innovation patent should be determined to be invalid and revoked on the *Patents Act* ground “that the invention, so far as claimed, does not comply with [s] 18(1A)(a)”.

These are questions about the meaning and application of:

- an “invention” (being “any manner of new manufacture the subject of letters patent and grant of privilege within s 6 of the Statute of Monopolies” (emphasis added)), and
- the s 18(1A)(a) requirement that the “invention” be “a manner of manufacture within the meaning of s 6 of the Statute of Monopolies”.

The significance of these issues is addressed in turn.

**“Invention” (“manner of new manufacture”)**

Presumably, the term “invention” in the context of s 101B(2)(b) of the *Patents Act* is tied to the context of s 18, meaning an “invention” for which a patent may be granted. In interpreting the term “invention”, the significance of “manner of new manufacture” has been established by a High Court majority in *NV Philips Gloeilampenfabrieken v Mirabella International Pty Ltd* (1995) 183 CLR 655,

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23 See Kimberly-Clark Australia Pty Ltd v Arico Trading International Pty Ltd (2001) 207 CLR 1 at 15 (Gleeson CJ, McHugh, Gummow, Hayne and Callinan JJ).
comprising Brennan, Deane and Toohey JJ, as a requirement that the face of the specification disclose something that has the necessary quality of inventiveness according to the traditional principles of what constitutes patentable subject matter (at 664). Thus, the invention will not be a “manner of new manufacture” if the specification discloses no new substance, no new characteristic of a known substance, no new use and no new method (at 666). In the case of innovation patents, this may be significant as the threshold for an innovation patent “innovative step”, being more than “novelty” but less than a standard patent “inventive step” cannot in practice be assessed given the very low threshold that already exists for “inventive step”. As the innovation patent scheme was intended to have a lower threshold than the standard patent’s “inventive step”, it is not clear whether the threshold requirement of “newness” for an innovation patent should also be different from (and lower than) a standard patent.

The Federal Court (and Deputy Commissioner) avoided these questions by not addressing the issues ((2006) 67 IPR 1 at 3). The Full Federal Court, however, appears to have concluded ((2006) 154 FCR 62 at 71; 69 IPR 221 at 229), “[i]n any event”, that Grant’s invention was not a “manner of new manufacture” according to the principle established in Commissioner of Patents v Microcell Ltd (1959) 102 CLR 232 and National Research Development Corp v Commissioner of Patents (1959) 102 CLR 252. That is, the trust, gift, loan and security were known products that were already known to be used to create a structure of financial rights and obligations or even a change in the person’s legal circumstances (at 71-72; 229-230). This approach is certainly consistent with earlier High Court authority, although difficult problems may arise that were not then addressed by the Full Federal Court.

The High Court’s decision in Commissioner of Patents v Microcell Ltd concerned the Patents Act 1903 (Cth) examination threshold of “whether to the best of his knowledge the invention is or is not novel”. The invention was a tube of synthetic resinous plastic material reinforced with mineral fibres used for self-propelled rocket projectors. The examination threshold was separated into inquiries of whether the complete specification discloses an “invention” within the meaning of the Patents Act 1903 (Cth) and whether that invention was “is or is not novel”.  

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24 Notably, the scope of this inquiry is subject to some dispute: see eg National Research Development Corp v Commissioner of Patents (1959) 102 CLR 252 at 261-262 (Dixon CJ, Kitto and Windeyer JJ) citing Re Johnson’s Patent [1937] 55 RPC 4 at 19 (Greene MR, Romer and McKinnin LJ); see also Lawson C, “Patenting Genes and Gene Sequences and Competition: Patenting at the Expense of Competition” (2002) 30 FL Rev 97 at 105-108.


26 See also National Research Development Corp v Commissioner of Patents (1959) 102 CLR 252 at 262 (Dixon CJ, Kitto and Windeyer JJ).

27 See Patents Act 1990 (Cth), s 18(1A)(b)(ii).

28 See Patents Act 1990 (Cth), s 7(4), (5) and (6).

29 This may explain why “innovative step” was not in issue in this case, and in effect, exclude this as a practical ground of revocation for all innovation patents. See Lawson, n 4 at 137; McGowan G, “The New Innovation Patent System: Will it Work?” (2002) 76 Law Inst J 64.

30 The “inventive step” test for a standard patent appears to be whether the inventor would be directly led as a matter of course to pursue one avenue in the expectation of success: Aktiebolaget Hassle v Alphapharm Pty Ltd (2003) 212 CLR 411 at 434 (Gleeson CJ, Gaudron, Gummow and Hayne JJ); Lockwood Security Products Pty Ltd v Iboric Products Pty Ltd (No 2) (2007) 235 ALR 202 at 213 (Gummow, Hayne, Callinan, Heydon and Crennan JJ).


32 See Grant’s Application [2004] APO 11 at [28].

33 Notably, the particular circumstances of this litigation meant that the grounds of novelty were not in issue and in other circumstances might have been expected to resolve this matter without recourse to “manner of manufacture”: see Lawson, n 4 at 137.

34 Patents Act 1903 (Cth), s 41(b).
the term “invention” being defined to mean “any manner of new manufacture the subject of letters patent and grant of privilege within s 6 of the Statute of Monopolies”.\textsuperscript{35} The High Court found that the complete specification did not disclose an “invention”\textsuperscript{36} because it was merely a claim for a known and used substance, and used for a purpose for which its properties made it suitable (analogous use) at 247-251):\textsuperscript{37} “[i]f stainless steel and its properties were known, and many kinds of articles had been made of it, it would not be possible for a man to claim a monopoly for making kitchen sinks of stainless steel merely because he was the first man who ever thought of doing this” (at 248).\textsuperscript{38} Applying this reasoning the High Court unanimously concluded: “[W]e do not think it can be said, merely because it does not seem previously to have occurred to anyone to make a rocket projector out of reinforced plastic, that any inventive idea is disclosed by the specification” (at 250, emphasis added).

The High Court’s decision in National Research Development Corp v Commissioner of Patents (1959) 102 CLR 252 concerned the Patents Act 1952 (Cth) examination threshold of “whether the application and specification comply with the requirements of this Act”.\textsuperscript{39} This included an assessment of whether the application and specification was a “patent” that was defined as an “invention”,\textsuperscript{40} which in turn was defined to mean “any manner of new manufacture the subject of letters patent and grant of privileges within s 6 of the Statute of Monopolies”.\textsuperscript{41} The invention was, in the contested part, for a method of selectively eradicating plants (weeds) by applying chemicals (at 260-261). The examiner’s report had concluded that as the chemicals were already known for such a purpose, and because the applicant did not amend their application or specification to address the concern by deleting certain claims, the Deputy Commissioner rejected the claims on the basis that it was “nothing but a claim for a new use of an old substance” (at 260-261):\textsuperscript{42} if “in the postulated state of knowledge the new purpose is no more than analogous to the purposes for which the utility of the substance is already known … the new purpose lacks the quality of inventiveness" (at 260-261). However, the High Court was able to distinguish the circumstances (at 264-265, emphasis added):

No-one reading the specification in the present case can fail to see that what it claims is a new process for ridding crop areas of certain kinds of weeds, not by applying chemicals the properties of which were formerly well understood so that the idea of using them for this purpose involved no inventive step, but by applying chemicals which formerly were supposed not to be useful for this kind of purpose at all. There is a clear assertion of a discovery that a useful result can be attained by doing something which the applicant’s research has shown for the first time to be capable of producing that result. This is not a claim which can be put aside as a claim for a new use of an old substance, true though it be that the chemicals themselves were known to science before the applicant’s investigations began.

\textsuperscript{35} Patents Act 1903 (Cth), s 4.

\textsuperscript{36} Applying the “appears practically certain” standard that “it should be clear on its face that the specification discloses no inventive step”: Commissioner of Patents v Microcell Ltd (1959) 102 CLR 232 at 246 (Dixon CJ, McTiernan, Fullagar, Taylor and Windeyer JJ).

\textsuperscript{37} Citing Re AF’s Application [1913] 31 RPC 58 (Sir Stanley Buckmaster); Re BA’s Application [1915] 32 RPC 348 (Sir Stanley Buckmaster); Re D Co’s Application [1921] 38 RPC 397 (Sir Ernest Pollock); Re CGR’s Application [1924] 42 RPC 320 (Sir Thomas Inskp); Re L & G’s Application [1940] 58 RPC 21 (Morton J).

\textsuperscript{38} Notably, the decision in Re Application of Compagnies Reunies des Glaces (1930) 48 RPC 185 at 189 (Sir Stafford Cripps) might provide a useful contrasting decision, as there the known qualities of hardened glass and glazing applied to vehicle windshields was not sufficient to deny a patent as there was no prior publications and no prior claims. For a similar and more recent Australian example see Bristol-Myers Squibb Co v FH Faulding & Co Ltd (2000) 97 FCR 524; 46 IPR 553 (Black CJ, Lhane and Finkelstein JJ) finding that a claim to a dosage regime of a known chemical compound (Taxol) for a known therapeutic use based upon known properties and involving no new method of administration was patentable.

\textsuperscript{39} Patents Act 1952 (Cth), s 47(1). Notably, here the Deputy Commissioner had reported adversely on the application and specification and directed that the specification be amended by removing a number of claims (see s 49(2)) and the appeal was against this direction (s 49(4)).

\textsuperscript{40} Patents Act 1952 (Cth), s 34(1).

\textsuperscript{41} Patents Act 1952 (Cth), s 6.

\textsuperscript{42} Citing Re BA’s Application [1915] 32 RPC 348 at 349 (Buckmaster LJ).
More recently the High Court majority in *NV Philips Gloeilampenfabrieken v Mirabella International Pty Ltd* (1995) 183 CLR 655 has confirmed that this principle continues under the *Patents Act*. There the dispute concerned the revocation of the patent and whether “the invention is not a patentable invention”.\(^{43}\) The phrase “patentable invention” was defined to be “an invention of the kind mentioned in s 18”\(^{44}\) that in turn meant, in part, “an invention that … (a) is a manner of manufacture within the meaning of s 6 of the *Statute of Monopolies*”\(^{45}\) where the term “invention” meant, in part, “any manner of new manufacture the subject of letters patent and grant of privilege within s 6 of the *Statute of Monopolies*”.\(^{46}\) The question was whether the alleged “invention” was a “manner of new manufacture”. The invention concerned a “low-pressure mercury vapour discharge lamp” relying on phosphors (chemicals that emit visible light when irradiated with ultraviolet radiation) in combinations that produced the desired light for fluorescent lamps while maintaining an efficient conversion of ultraviolet radiation to the desirable light radiation.

In the Federal Court in *NV Philips Gloeilampenfabrieken v Mirabella International Pty Ltd* (1991) 24 IPR 1 Wilcox J had found that the luminescent characteristics of phosphors were well known and that a skilled technician would know which combination of phosphors to try to get the desired efficiency (at 34-36). In the Full Federal Court ((1993) 44 FCR 239; 26 IPR 513) Lockhart J, with whom Northrop J agreed (at 241; 515), addressed the question of construction (that is, whether “manner of new manufacture” and “manner of manufacture” in s 18 mean the same thing and found that they did) (at 263, 265-266; 536, 539), before addressing whether the specification disclosed “an inventive idea or step” necessary to satisfy the requirement of a “manner of new manufacture” (or a “manner of manufacture”) (at 263-264; 536-537). Lockhart J found that “what the patentee has done in this case is to choose two desirable characteristics of the known phosphors and to claim lamps using all phosphors, present and future, possessing those characteristics” (at 265; 538): “[e]ssentially what the patentee claims in the patent in suit is a lamp that has two basic characteristics, namely, short term depreciation which is related to efficiency of light and electro-negativity which is a function of a relevant chemical formula. This is not a patentable invention” (at 265; 539).

Meanwhile, Burchett J reached a different conclusion on the construction issue (that is, whether “manner of new manufacture” and “manner of manufacture” in s 18 meant the same thing, and found that they were different) (at 268-271; 542-544), before addressing whether the invention was a “manner of new manufacture” based on the specification disclosing an inventive step (at 271; 544). On the face of the specification Burchett J found there was the requisite inventive step (at 281-282; 553-554):

> There is here invention “found in some new method of using the material or some new adaptation of it so as to serve the new purpose”. An advantage is taken of a hitherto unrecognised characteristic of the apparent severe loss of efficiency in a highly loaded lamp, namely, the much greater effect of 185 nm radiation and mercury attack upon an otherwise perfectly efficient phosphor when utilised in such a lamp, and the ability of those phosphors only which are identified in the specification to utilise such radiation and resist such attack in the new kind of lamp. Indeed, the appellants’ lamp falls squarely within the language of the court in [*NRDC*].

In effect the Federal Court (at 34-36) and the Full Federal Court (at 241; 515 (Northrop J), at 266; 539 (Lockhart J) and at 285; 557-558 (Burchett J)) had all found that a “manner of new manufacture” precluded, in the words of *Commissioner of Patents v Microcell Ltd*, “nothing but a claim for the use of a known material in the manufacture of known articles for the purpose of which its known properties make that material suitable”. The difference in decision was that the Federal Court (at 34-36) and Full Federal Court majority concluded that the invention was not a “manner of new manufacture” because it was the mere new use of a known product (at 241; 515 (Northrop J), at 266; 539 (Lockhart J)), while Burchett J considered that this was not the case (at 285; 557-558). On appeal

\(^{43}\) *Patents Act 1990* (Cth), s 138(3)(b); see also *NV Philips Gloeilampenfabrieken v Mirabella International Pty Ltd* (1993) 44 FCR 239 at 254 (Lockhart J), at 268 (Burchett J); 26 IPR 513 at 528 (Lockhart J), at 542 (Burchett J).

\(^{44}\) *Patents Act 1990* (Cth), Sch 1.

\(^{45}\) *Patents Act 1990* (Cth), s 18(1).

\(^{46}\) *Patents Act 1990* (Cth), Sch 1.
to the High Court ((1995) 183 CLR 655) the issue was only about the appropriate construction of s 18(1) (at 659). As a consequence of the High Court’s majority decision (at 663-664), the propriety of the Full Federal Court’s decision was not in issue and so the appeal was dismissed (at 668). The effect, however, was to confirm that the Commissioner of Patents v Microcell Ltd and NRDC decisions that the mere new use of a known product, in the NV Philips Gloeilampenfabrieken v Mirabella International Pty Ltd sense, is not a “manner of new manufacture” for the purposes of the Patents Act.

The conclusion of the Full Federal Court in Grant v Commissioner of Patents (2006) 154 FCR 62; 69 IPR 221; [2006] FCAFC 120 that Grant’s invention was not a “manner of new manufacture” according to this principle appears to have been reached only in passing (“[i]n any event”) and without any detailed reasoning (at 71-72; 229-230). Perhaps, however, this cursory approach was suitably cautious and avoided some potentially difficult problems. First, that the Australia – United States Free Trade Agreement [2005] ATS 1, Art 17.9(1) expressly requires that “[t]he Parties confirm that patents shall be available for any new uses or methods of using a known product”. The authority of Commissioner of Patents v Microcell Ltd, National Research Development Corp v Commissioner of Patents and NV Philips Gloeilampenfabrieken v Mirabella International Pty Ltd would appear to directly contradict this provision. Second, by addressing this principle, the Full Federal Court has raised a further problem that probably defies any resolution. As the innovation patent scheme was intended to have a lower threshold than the standard patent’s “inventive step”, it seems at least possible that innovation patents may also require a lower standard of “inventiveness”. The Full Federal Court has confirmed that Grant’s invention did not satisfy that standard, but provided no insight into whether the standard is different for innovation patents, what that standard might be, or how it might be assessed. A good opportunity to clarify the law (if that was in fact possible) has been passed over.

“Manner of manufacture”

The Federal Court ((2006) 67 IPR 1 at 2) and Full Federal Court ((2006) 154 FCR 62 at 71; 69 IPR 221 at 229) (and Deputy Commissioner ([2004] APO 11 at [28])) all concluded that Grant’s invention was not a “manner of manufacture”. The Full Federal Court (at 72; 230) rejected the Federal Court’s reasoning (at 5-6) about social costs and public benefits, and founded its decision on a characterisation of the invention in terms of producing something that was an artificially created state of affairs “in the sense of a concrete, tangible, physical, or observable effect” being a “physical effect in the sense of a concrete effect or phenomenon or manifestation or transformation” even when that is just “a state of affairs created by the application or effect of the method” (at 70; 228). The pre-eminence of this decision has been to establish that there are real boundaries to the High Court’s formulations in NRDC about the appropriate scope of patentable subject matter. The question is whether the approach of the Full Federal Court, in setting a boundary for “manner of manufacture”, is consistent with the earlier conceptions of “manner of manufacture”, or marks a new development.

As a generalisation, the Australian patent law (being sequentially the Patents Act 1903 (Cth), the Patents Act 1952 (Cth) and the Patents Act) has maintained a distinction that abstract concepts and applications that are not “manufactures” are not patentable because by themselves they have no practical application (being a discovery at best), or belong to the “useful arts”. These unpatentable abstract concepts and applications that are not “manufactures” have included the fine arts, discoveries,
ideas, scientific theories, schemes and plans, laws of nature, mathematical algorithms, printed matter, mere working directions, and so on. However, this distinction between the abstract concepts and applications that are not “manufactures” and an industrial or commercial requirement appears to have been increasingly breaking down. The most significant milestone in that development was the High Court’s “watershed” decision in NRDC (1959) 102 CLR 252. There the High Court brought together a number of disparate conceptions and stated the “right question” (at 269):

The word “manufacture” finds a place in the present Act [Patents Act 1952 (Cth)], not as a word intended to reduce a question of patentability to a question of verbal interpretation, but simply as the general title found in the Statute of Monopolies for the whole category under which all grants of patents which may be made in accordance with the developed principles of patent law are to be subsumed. It is therefore a mistake, and a mistake likely to lead to an incorrect conclusion, to treat the question whether a given process or product is within the definition as if that question could be restated in the form: “Is this a manner (or kind) of manufacture?” It is a mistake which tends to limit one’s thinking with reference to the idea of making tangible goods by hand or by machine, because “manufacture” as a word of everyday speech generally conveys that idea. The right question is: “Is this a proper subject of letters patent according to the principles which have been developed for the application of s 6 of the Statute of Monopolies?”

In applying the “right question” the High Court noted the broadening conception of “invention” over time (at 269-276), and concluded there was a requirement for “an artificially created state of affairs” and that “the significance of the product is economic” (at 277). The only limits contemplated by the High Court at the time were where the alleged invention did offer some material advantage of “value to the country … in the field of economic endeavour” (such as surgery and treating the human body “because the whole subject is conceived as essentially non-economic”) (at 275). A further limit was where the alleged invention was the end result of some inherent characteristic of the thing (“[h]owever advantageously man may alter the conditions of growth, the fruit is still not produced by his action”) (at 277-279).

Subsequent High Courts have not been required to directly apply the “right question” from NRDC, although they have provided some insight into the broader context of how the test might be applied. So, eg, in Joos v Commissioner of Patents (1972) 126 CLR 611 an application was made for an invention involving the treatment of the human body (a process treating human hair and nails while attached to and growing on the body). The issue was whether this process was a patentable “manner of manufacture” for the purposes of the Patents Act 1952 (Cth). The sole objection of the Deputy Commissioner leading to the appeal was that the application was not proper subject matter because it claimed a process for the treatment of parts of the human body (that had been expressly suggested might be excluded in NRDC “because the whole subject is conceived as essentially non-economic”) (at 617). Following the NRDC reasoning, Barwick CJ formulated the issue as whether this process was a suitable subject matter for the grant of a patent under the Patents Act 1952 (Cth) (at 617). In addressing this, Barwick CJ recast the issue for consideration, in the circumstances of the particular case, as “whether a process, otherwise appropriate for the grant of a monopoly under the Statute, must be held not to be a proper subject for a grant simply because it is a process for ‘treatment’ of a part of the human body” (at 619). In resolving this issue Barwick CJ distinguished between “the medical treatment of disease, malfunction or incapacity” (narrowly defined) that he conceded, although did not

52 For an overview see IP Australia, Australian Patent Office Manual of Practice and Procedure, Vol 2 (IP Australia, 2007) at [2.9.1]-[2.9.7].
53 Joos v Commissioner of Patents (1972) 126 CLR 611 at 616 (Barwick CJ). This decision used the term “watershed” in the context of overturning any authority for the proposition that a process must result in the production of improvement of a vendible article, and instead only required that the process have “commercial application” (at 616-617).
54 Notably, claim to the process might capture the product produced by the process. So, a claim to modified conditions of growth might capture the fruit grown according to the application of those conditions.
55 Joos v Commissioner of Patents (1972) 126 CLR 611 at 615-616 (Barwick CJ).
56 See also National Research Development Corp v Commissioner of Patents (1959) 102 CLR 252 at 275 (Dixon CJ, Kitto and Windeyer JJ).
decide, might be unsuitable subject matter (at 619 and 622), and the cosmetic treatment of human hair and nails attached to the body that were not “medical treatment” (at 623). The result was that Barwick CJ concluded that a process for treating human hair and nails while attached to and growing on the body was not “a manner or method of medical treatment of the human body within the narrow exception to patentability” and was therefore patentable (at 623). In effect, Barwick CJ resolved the issues by characterising the invention outside the category of potential exclusions of “manufactures”, and accepted that a process for treating human hair and nails was otherwise a patentable manner of manufacture (at 618-619).

Significantly, however, Barwick CJ expressed the view that, although he was not required to find a basis for the exception, he would have found the “treatment” exception identified in NRDC on public policy in the language of the Statute of Monopolies “generally inconvenient” (at 623). This issue was subsequently addressed by the Full Federal Court in Anaesthetic Supplies Pty Ltd v Rescare Ltd (1994) 50 FCR 1; 28 IPR 383 and Bristol-Myers Squibb Co v FH Faulding & Co Ltd (2000) 97 FCR 524; 46 IPR 553 finding that methods of medical treatment were suitable subject matter, and that the language of “generally inconvenient” had little practical application.57 The Full Federal Court in Grant v Commissioner of Patents (2006) 154 FCR 62; 69 IPR 221 also appears to have endorsed this reluctance to embrace any limits imposed by the language of “generally inconvenient” (at 72; 230), expressly rejecting the Federal Court’s “additional reason” that balanced social and public costs and benefits ((2006) 67 IPR 1 at 6) (at 72; 230).

More importantly in the present context, Barwick CJ in Joos v Commissioner of Patents (1972) 126 CLR 611 did address his understanding of the NRDC’s requirement for “commercial application” ((1959) 102 CLR 252 at 275). In dealing with the implication in the examiner’s report of the application that surgery and treating the human body were not suitable subject matter “because the whole subject is conceived as essentially non-economic”, Barwick CJ stated (at 618):

> The national economic interest in the product of good surgery – and therefore in the advancement of its techniques – if in no other respect than the repair and rehabilitation of members of the work force, including management in that grouping, is both obvious and may be regarded as sufficiently proximate, in my opinion, as to be capable of satisfying the economic element of an invention, if other elements are present and no impediments exist to the grant. One has only to recall the economic impact of workers’ compensation, invalid pensions and repatriation costs to recognise that proximity.

Then, in addressing the contention “that hairdressing was not of that economic or commercial significance which would make the claimed process a process having a commercial application” (at 623-624):58

> It seems to me that there is involved in this submission a misconception of what is meant by the need for the invention to be in the commercial field. It is not, in my opinion, that the process must be employed in trade or commerce or some activity which is usually considered to be part of industry or business. It is said in … [NRDC] … “the underlying idea seems to be the same as that which Evershed J suggested in Rantzen’s Case [1946] 64 RPC 63 at 66 where he spoke of the expression ‘vendible product’ as laying proper emphasis upon the trading or industrial character of the processes intended to be comprehended by the Acts – their ‘industrial or commercial or trading character’ as Lloyd-Jacob J himself described it in Re Lenard’s Application [1954] 71 RPC 190 at 192. The point is that a process, to fall within the limits of patentability which the context of the Statute of Monopolies has supplied, must be one that offers some advantage which is material, in the sense that the process belongs to a useful art as distinct from a fine art (see Re Virginia-Carolina Chemical Corporation’s Application [1958] RPC 35 at 36) – that its value to the country is in the field of economic endeavour”. In my opinion, that economic value will not always be directly supplied by the nature of the activity which would utilise the process. In … [NRDC] … it was the economic advantage to be had from a reduction of weed in grain crops, though both for the profit of the grower and for the economic advantage of the community, which provided the relevant commercial significance. In this case, the processes are to be used in what cannot be described otherwise than as a commercial activity of hairdressing, a sector of


58 Joos v Commissioner of Patents (1972) 126 CLR 611 at 623 (Barwick CJ).
activity which accounts, I imagine, for a great deal of employment. I could not assign the skill of the hairdresser to the area of the fine arts and have little difficulty in placing it in the area of the useful arts.

In my opinion, it is an activity in the field of economic endeavour and has commercial significance as those expressions ought to be understood in relation to the grant of patents.

The Federal Court in Grant v Commissioner of Patents (2006) 67 IPR 1 reasoned, contrary to the conclusions of the Deputy Commissioner ([2004] APO 11 at [21]), that the invention did not have the requisite economic utility because it did “not add to the economic wealth of Australia or otherwise benefit Australian society as a whole”, even though it might have value to those whose assets would have been ultimately protected and their professional advisers (at 6). The Full Federal Court ([2006] 154 FCR 62; 69 IPR 221) rejected this characterisation and concluded that “interpretation and application of the law would not be considered as having, in the words of NRDC, an industrial or commercial or trading character, although without doubt it is an area of economic importance (as are the fine arts)” (at 71; 229). While this conclusion was undoubtedly open to the Full Federal Court, it seems in modern times difficult to contemplate the work of lawyers, financial planners, accountants and so on as a branch of the fine arts. The modern service economy (including the “interpretation and application of the law” among other things) most probably requires the work of service providers, albeit provided with “ingenuity and imagination”, to be considered of “an industrial or commercial or trading character” because they do provide a material advantage (at 71; 229). It seems very unlikely that these activities are not in the field of economic endeavour that has commercial significance. This would certainly be consistent with Barwick CJ’s reasoning and the authority cited in his judgment.

The Full Federal Court’s decision is also significant in the way it is distinguishable from the earlier Federal Court decision in Welcome Real-Time SA v Catuity Inc (2001) 113 FCR 110 at 132-133; 51 IPR 327 at 349-350 (Catuity) and CCOM Pty Ltd v Jiejing Pty Ltd (1994) 51 FCR 260 at 291; 28 IPR 481 at 511 (CCOM) (and the United States decisions in State Street Bank & Trust Co v Signature Financial Group Inc 149 F 3d 1368 (Fed Cir 1998) and AT&T Corp v Excel Communications Inc 172 F 3d 1352 (Fed Cir 1999)) that themselves were distinguished from unpatentable working directions and “fine art” methods inventions. The Full Federal Court appears to have chosen a characterisation of Grant’s invention that may be hard to apply generally and relies on a questionable distinction of the Federal Court decision in Catuity (at 70; 228).

In Catuity (2001) 113 FCR 110; 51 IPR 327, Heerey J in the Federal Court concluded that a process and device to operate smart cards for traders’ loyalty programs was a patentable “manner of manufacture” (at 137-138; 353-354). That conclusion expressly rejected the applicant’s argument that “the patent was no more than a method or system for using well known integers – a chip card, the memory space on that card, various computer programs, readers and printers – to operate familiar kinds of loyalty and incentive schemes for customers” (at 133; 349). The Federal Court there reasoned that there was more that just an “abstract idea” or “method of calculation” as “cards can be issued making available to consumers many different loyalty programs of different traders as well as different programs offered by the same trader. All this can be done instantaneously at each retail outlet” (at 137; 353). However, a closer analysis of the invention shows that the way the invention was characterised was central to its patentability, the Federal Court expressly rejecting any contention that business systems per se were unpatentable (at 137-138; 353-354).

The Catuity invention allowed cards with a small memory capacity to be used for many different merchants each operating their own proprietary loyalty program by storing the relevant data and information in separate files in the microprocessor (at 116-117; 333). The advance that was the

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59 Claim 1 provided: “Method of processing coded information during a purchase or payment operation by a customer, holder of a card with a chip, at a trader’s, in which the contents of the memory of the chip card are read and a coupon is or is not printed on the basis of the information arising from the contents of said memory, characterised in that, with the memory of the chip card including a first identification file, termed the Member file, identifying the card-holding customer, a second accounting file, termed the Points file, and a third file, termed the Behaviour file, relating to the behaviour of the card holder towards the user trader or traders, a specified algorithmic processing is performed dependent, on the one hand, on the date of the operation and, on the other hand, on the information contained in said files, including the Behaviour file, the algorithmic processing including a step of incrementing or decrementing the Point file by a predetermined number of points depending on the frequency and/or the nature of first, second or nth visit by the card holder over a time period of specified duration, the coupon is printed only if
The invention was to “dynamically” store each merchant’s loyalty program in a separate record of a file (called the “behaviour file”) so that only those proprietary loyalty programs used were recorded and so saving valuable memory space on the cards (at 116-117; 333). In effect, the invention used well-known electronic devices and by recording data and information in the microprocessor about a consumer’s spending patterns the records could be used to calculate benefits to promote further trade with that consumer. The Federal Court placed significance on the cards being issued to consumers so that they could then use the different proprietary loyalty program (at 137-138; 353-354):

What is disclosed by the patent is not a business method, in the sense of a particular method or scheme for carrying on a business – for example a manufacturer appointing wholesalers to deal with particular categories of retailers rather than all retailers in particular geographical areas, or Henry Ford’s idea of stipulating that suppliers deliver goods in packing cases with timbers of particular dimensions which could then be used for floorboards in the Model T. Rather, the patent is for a method and a device, involving components such as smart cards and POS terminals, in a business; and not just one business but an infinite range of retail businesses.

The approach in *Catuity* was asserted by the Federal Court to be indistinguishable from the earlier Full Federal Court decision in *CCOM* (1994) 51 FCR 260; 28 IPR 481 (at 137; 354). In *CCOM* a database of stroke-type categories of characters was selected and retrieved using conventional computer functions to perform an otherwise linguistic exercise assembling Chinese language characters (at 295; 514). The Full Federal Court comprising Spender, Gummow and Heerey JJ concluded that the claimed computer processing apparatus was a “manner of manufacture” because the invention resulted in a product that was useful and in a field of economic endeavour (at 295-296; 514-515). The Full Federal Court applied *NRDC* as requiring “a decision as to what properly and currently falls within the scope of the patent system” (at 291; 511) being “a mode or manner of achieving an end result which is an artificially created state of affairs of utility in the field of economic endeavour” (at 295; 514). Cooper J in the earlier Federal Court decision in *CCOM Pty Ltd v Jiejing Pty Ltd* (1993) 27 IPR 577 had characterised the invention and found that there was no “manner of manufacture” (at 594):

The material feature of the claimed combination is the means by which Chinese characters are categorised by stroke-type category and stroke order as defined in the specification of the petty patent in suit and the use of such criteria to retrieve and display Chinese characters. That is, the procedures used to organise and process the data. The other integers or programming and computer hardware are merely a conventional means to produce the desired result. Taking the claim as a whole, that which is sought to be made the subject matter of a monopoly is the use of stroke-type categories and the stroke order as defined in the specification to organise and process data relevant to Chinese characters in a database and to retrieve and display Chinese characters on a computer screen. The formulation of such criteria and their use as rules to organise and process data stored in a database in a conventional computer are the product of human intellectual activity lying in the fine arts and not the useful arts.

On appeal, the Full Federal Court in *CCOM* rejected this characterisation, instead favouring a characterisation of the invention as “a particular method of characterisation of character strokes which is applied to an apparatus in such a way that operation of the keyboard will enable the selection through the computer, in a particular way, of the appropriate Chinese characters required for word processing” (at 287; 507). The Full Federal Court then concluded (at 295; 514):

*NRDC* … requires a mode or manner of achieving an end result which is an artificially created state of affairs of utility in the field of economic endeavour. In the present case, a relevant field of economic endeavour is the use of word processing to assemble text in Chinese language characters. The end result achieved is the retrieval of graphic representations of desired characters, for assembly of text. The mode or manner of obtaining this, which provides particular utility in achieving the end result, is the storage of data as to Chinese characters analysed by stroke-type categories, for search including “flagging” (and “unflagging”) and selection by reference thereto.

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In both *Catuity* and *CCOM* the patentable inventions were for methods for manipulating data and information using a computer as a device with the product being commercially useful. In both cases the reduction of the methods to electronic devices had replaced what had previously been a laborious exercise in manual and mental administration – collecting a prescribed number of stamps that were then sent to a central location and a gift sent in return in *Catuity* (2001) 113 FCR 110 at 114-115; 51 IPR 327 at 331, and translation from one language into another in *CCOM* (1994) 51 FCR 260 at 286; 28 IPR 481 at 506. Similarly, in the United States in *State Street Bank & Trust Co v Signature Financial Group Inc* 149 F 3d 1368 (Fed Cir 1998) where the United States Court of Appeals for the Federal Circuit held that an invention transforming data through a series of mathematical calculations on a computer to determine a share price was a practical application of a mathematical algorithm that produced “a useful, concrete and tangible result”, and was therefore patentable: “[u]npatentable mathematical algorithms are identifiable by showing they are merely abstract ideas constituting disembodied concepts or truths that are not ‘useful’. To be patentable an algorithm must be applied in a ‘useful’ way” (at 1373). 60 Then, later, in *AT&T Corp v Excel Communications Inc* 172 F 3d 1352 (Fed Cir 1999) the United States Court of Appeals for the Federal Circuit confirmed that an invention that adds telephone user information to a database using a mathematical algorithm (data gathering) that could then be used to apply appropriate user charges to telephone users was patentable subject matter (at 1359-1360). 61 In both *State Street* (at 1373) and *AT&T Corp* (at 1358) manipulating data and information through a machine that had previously been manual and mental administration was sufficient to change what would otherwise probably have been purely unpatentable abstract ideas.

The Full Federal Court in *Grant v Commissioner of Patents* (2006) 154 FCR 62; 69 IPR 221; [2006] FCAFC 120 considered the invention in *Catuity* was different because its method “produced tangible results in the writing of new information to the behaviour file and the printing of the coupon” where the invention “involved an application of an inventive method where part of the invention was the application and operation of the method in a physical device” (at 70; 228). Meanwhile, Grant’s invention “does not produce any artificial state of affairs, in the sense of a concrete, tangible, physical, or observable effect” (at 70; 228). Unfortunately, the Full Federal Court did not address Grant’s contention that *Catuity* did not require “a device” or “the application of technology” (at 70; 228). The effect of the Full Federal Court’s distinctions, however, appears to be in limiting the scope of business system inventions that can be patented to only those that result in a “physical effect” or a “physical consequence” (at 70-71; 228-229).

In both *CCOM* and *Catuity* a computer as a machine put into practice the conception of the idea that has been embodied in the computer program. Meanwhile, Grant’s unpatentable scheme relied on a series of documents and acts (actually protecting physical assets) to put into practice the conception of the idea that had been embodied in a series of documents in the form of a trust, loan and security. However, it is difficult to imagine that Grant’s invention would not also have a “physical effect” or a “physical consequence”. A person applying Grant’s method making the physical documentation of the arrangement would have been shielded from some liability of real and physical things (subject to the application of the *Bankruptcy Act 1966* (Cth) allowing such an arrangement). Recall that in *State Street* the requisite “useful, concrete and tangible result” was satisfied by “a final share price momentarily fixed for recording and reporting purposes” (at 1373), the speculated value of a financial instrument (created only by laws) establishing equity in a firm for an investment portfolio organised as a partnership and delivering certain tax advantages to the partnership. Similarly, in *Catuity*, the result was an opportunity to participate in a proprietary loyalty program with the potential of some benefit to promote further transactions in other goods and services (at 137-138; 353-354). Grant’s invention was a method of creating a real effect on physical things, and having applied the method making the

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physical documents (the trust, a gift, a loan and a security) there were real-world consequences including retaining possession of real assets. In these circumstances the distinctions drawn by the Full Federal Court appear far from certain.

The Full Federal Court also concluded that the inventions in Catuity and CCOM, as in State Street and AT&T Corp, were different because in the resulting “physical effects” there was “a component that was physically affected or a change in state or information in a part of a machine” (at 70; 228). The difference between the CCOM and Catuity “computers” and Grant’s “old” technology using pencils and paper (although also possibly through a “computer”) was an undoubted quality of technology. However, it is difficult to imagine that Grant’s invention would not also have required a “machine”, albeit just a device for recording (such as a device holding a plurality of substances capable of making a mark on a recorder (a pen or pencil)) and a recorder (such as the storage medium on which the output from the device for recording is stored (a piece of paper or other material)) or a word processor (such as a data processing system for managing a plurality of records and allocating the records to a device for making visible marks on a marking medium (computer and printer)). Characterised this way, Grant’s invention would also seem to have the necessary “concrete effect or phenomenon or manifestation or transformation” (at 70; 228). Notably the Full Federal Court expressly confirmed that the Patents Act was not framed within a regime of positively defined “science and technology” requiring, in the terms of the Deputy Commissioner in Re Peter Szabo and Associates Pty Ltd (2006) 66 IPR 370 at 377-378, “the application of science or technology in some material manner”. The Full Federal Court instead favoured a conception of the alleged invention that was not rigidly proscribed by “[w]hat is or is not to be described as science or technology” and that was consistent with the emphasis in NRDC about “the unpredictability of the advances of human ingenuity” (at 71; 229). In these circumstances the distinctions drawn by the Full Federal Court about the necessary “physical effects” also appear far from certain.

The Full Federal Court also restated the conception that a “manner of manufacture” does not include “business, commercial and financial schemes, which are ‘intellectual information’” so that “a method that is in the nature of directions for use does not constitute an invention or a manner of manufacture” (at 70; 228). Unfortunately, the Full Federal Court avoided dealing with the cases that distinguish between mere instructions (variously called “printed matter”, “intellectual information”, “solely an intellectual, literary or artistic connotation of matter”, and so on) and patentable inventions despite characterising Grant’s invention as “a mere scheme, an abstract idea, mere intellectual information” (at 70; 228).

The language of “intellectual information” arose in Burroughs Corp (Perkin’s) Application [1974] RPC 147 where Graham J had opined that unpatentable “intellectual information” was the product of a method regarded purely as the conception of an idea (at 161). There Graham J stated (at 161):

If … in practice the method results in a new machine or process or an old machine giving a new and improved result, that fact should in our view be regarded as the “product” or the result of using the method, and cannot be disregarded in considering whether the method is patentable or not.

Later Graham J in Ciba-Geigy (Durr’s) Applications [1977] RPC 83 (Patents Appeals Tribunal) reasoned that if instructions in words on a package about how to use a product could be said to modify or qualify the package for a useful purpose, then there might be patentable subject matter (at 87). Similarly, Russell LJ in Ciba-Geigy (Durr’s) Applications [1977] RPC 83 (Court of Appeal) considered that information in writing on a container that interacts with the contents of the container might be patentable (at 89). However, the “extreme limit”63 of these cases was Pitman’s Application [1969] RPC 646. There the invention was a method of conveying to a person reading text the

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63 The term used to deal with the conclusion that Pitman’s Application [1969] RPC 646 was confined by “the possibility that it might ultimately be found that the functional association between the material as printed and the human speech organs would be sufficient to provide justification for the grant of a patent”: Nelson’s Application [1980] RPC 173 at 177 (Whitford J).
appropriate pronunciation of words that might ordinarily only be apparent from hearing the spoken words by signifying the appropriate pronunciation by super and subscripts (eg “UNderST AND ing”) (at 647). Lloyd-Jacob J stated (at 649):

… a variation of the visual significance of a character or group of characters to indicate degrees of stress, a variation in location relative to the mean axis of a line of writing to indicate pitch modulation … The physical product which will embody this novel presentation of lettered words will be in the form of a sheet or collection of sheets as in a book which will be utilisable either as a manual for personal reading or for submission to the operation of a reading machine wherein scanning and encoding means permit the transmission of the denoted sounds to decoding and reception devices wherein conversion to and emission of speech will be effected.

Lloyd-Jacob J, when considering the claimed invention in light of its recommended use in a speaking machine, concluded there was a definite mechanical purpose, and further, “[i]n its broader aspect of association with the organs of human speech, a functional purpose is no less apparent” (at 650). As the claimed invention could not be solely categorised as “an intellectual, literary or artistic connotation of matter”, there was “sufficient material” to find that the invention was patentable (at 650). Perhaps establishing the boundaries of these kinds of inventions, Whitford J in Nelson’s Application [1980] RPC 173 considered whether an invention that consisted of a printed sheet on which a “message” was presented pictorially, in words and “by means of a humorous reinforcement” for teaching was patentable (at 174). In rejecting the application as unsuitable patentable subject matter, Whitford J considered the content of literary or artistic matter was better addressed through copyright and other forms of intellectual property (at 177). Whitford J also noted that Lloyd-Jacob J in Pitman’s Application “does say that it cannot with confidence be asserted that the mechanism of voice production would be assuredly excluded from consideration as adding nothing to the mere arrangement of letters upon the sheet” (at 176-177).

The boundary of patentability of “intellectual information” remained uncertain (and arbitrary), with patents being refused for an astro-navigation chart, naval tactics, positioning houses in a street, a system for navigating using navigational aids, musical notations, systems for indexing, a system for charging bus passengers using identification cards, a system of labels on a roulette wheel, and so on. Meanwhile, patents have been granted for a blank space over the fold of a newspaper to allow easy reading, packs of cards for playing new games, arranging information on each end of a cinema ticket so that it could be torn in half, a printed card for use in time-keeping machines, and so on. As these cases well illustrate, the distinction between patentable “intellectual information” and unpatentable “intellectual information” is, at best, arbitrary. Again, the distinctions drawn by the Full Federal Court appear far from certain.

64 Claim 1 provided: “A medium carrying an instructional message in three parts, of which one part comprises a visual form of the message, a second part comprises a verbal form of the message and a third part comprises a humorous reinforcement related to the content of the message.”
65 Kelvin & Hughes’ Application [1954] 71 RPC 103 (Lloyd-Jacob J).
66 F’s Application [1920] RPC 109 (Solicitor-General).
68 WL’s Application [1924] 41 RPC 617 (Solicitor-General).
69 C’s Application [1920] 37 RPC 247 (Solicitor-General).
70 Ward’s Application [1912] 29 RPC 79 (Solicitor-General).
71 Stahl & Larsson’s Application [1965] RPC 596 (Lloyd-Jacob J).
72 Kent & Thanet Casino’s Application [1968] RPC 318 (Lloyd-Jacob J).
73 Cooper’s Application [1902] 19 RPC 53 (Solicitor-General).
74 Cobianchi’s Application [1953] 70 RPC 199 (Lloyd-Jacob J).
75 Fishburn’s Application [1940] 57 RPC 245 (Morton J).
76 Alderton’s Application [1942] 59 RPC 56 (Morton J).
CONCLUSIONS

The concern raised by Grant v Commissioner of Patents is that if Grant’s invention had been a process that was implemented through the device or apparatus of a computer (or other suitably mechanistic device), then it would probably have been patentable according to the developments reflected in CCOM (at 295; 514-515) and Catuity (at 137-138; 353-354). That is, the threshold for “manner of manufacture” would have been the approach of the Full Federal Court in CCOM applying the principle from NRDC, as requiring “a decision as to what properly and currently falls within the scope of the patent system” (at 291; 511), being “a mode or manner of achieving an end result which is an artificially created state of affairs of utility in the field of economic endeavour” (at 295; 514).

However, the Full Federal Court in Grant v Commissioner of Patents appears to have narrowed this broad application of “manner of manufacture”. This would appear to mark a new development in setting a boundary for the Patents Act “manner of manufacture”. Perhaps more importantly, however, the Full Federal Court’s decision marks a limit on the possible application of the Patents Act to promoting certain inventions (and innovations). The policy question posed by this decision is why some inventions in a rapidly developing and vital sector of the economy are undeserving of the kinds of incentives offered by the Patents Act. And perhaps the more difficult question, if some inventions do not require the Patents Act incentives, maybe other classes of inventions also do not require those incentives. As the service sector of the economy expands, this question will become increasingly important and might also include medical practitioners, teachers, management consultants and anyone developing and implementing inventions that rely on the synthesis and application of data and information (knowledge inventions). However, as the analysis in this article suggests, there may be good grounds for limiting the significance of Grant v Commissioner of Patents, and maintaining the potential for patenting a broader range of inventions that synthesise and apply data and information.

77 This appears to be the appropriate approach in Australia, with a consistent approach apparent in the United States and Europe. See eg Lawson C, “Patenting Health-related Databases and Information in Australia” (2005) 17 Bond LR 58.

78 See also Welcome Real-Time SA v Catuity Inc (2001) 113 FCR 110 at 136, 137; 51 IPR 327 at 352, 354 (Heerey J).

79 For example, the Advisory Council on Intellectual Property, Report on a Review of the Patenting of Business Systems (IP Australia, 2003) has stated (p 8): “The emergence of knowledge based economies and globalization has greatly increased the importance of IP to the point where effective protection and management of intellectual property is an integral part in both successfully commercializing innovation and contributing to national economic performance. The growing dominance of service industries in the economy is creating higher demand for the protection of commercial advantages and innovations.”

80 Albeit highlighting the need for some means of limiting possibly inappropriate patents that might include specific “public interest” exclusion(s) or a re-invigoration of the “generally inconvenient” component of s 6 of the Statute of Monopolies. See eg Lawson, n 4; Monotti, n 4.