



ADVISORY COUNCIL ON INTELLECTUAL PROPERTY

**REPORT ON A REVIEW OF
THE PATENTING OF BUSINESS SYSTEMS**

September 2003

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1 Terms of Reference

Parliamentary Secretary the Hon Warren Entsch MP, having responsibility for patent, trade mark and design matters within the portfolio of Industry, Tourism and Resources, asked the Advisory Council on Intellectual Property (ACIP) in February 2002 to:

- examine the issues of the patenting of business systems and, within the constraints of international obligations, propose policy options that best meet Australia's national interest and the needs of stakeholders.

2 Executive Summary

The emergence of knowledge based economies and globalisation has greatly increased the importance of intellectual property to the point where effective protection and management of intellectual property is an integral part in both successfully commercialising innovation and contributing to national economic performance. The growth of service industry activity in the economy is creating higher demand for the protection of commercial advantages and innovations. Although the patenting of business systems is not new, the rapid development of information technology has created new opportunities for innovation in the business world and has led to an increase in the numbers of patents sought in this area.

The term 'business system' is a generic one and not precisely defined in any jurisdiction. To conduct this review, ACIP chose the following definition as a guide: "a method of operating any aspect of an economic enterprise". This definition typically encompasses trading, transacting, finance, resource management, marketing and customer service.

Australia, as a member of the World Trade Organisation, has an obligation under the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement to make patents available for any inventions in all fields of technology. Discrimination according to the field of technology is specifically prohibited under the TRIPS Agreement. However, business system inventions could be excluded from patentability if they are not considered as being within a 'field of technology'. Consequently the patentability of business systems varies between jurisdictions, depending on the manner in which they are claimed. Broadly speaking, business systems may be considered patentable in the US, Japan and Australia, but not patentable in Europe and the United Kingdom. It is advantageous for Australian law to be in harmony with the major industrialised countries, however the differing approaches on this issue means there is no clear guidance for Australia in terms of the harmonisation of international IP laws.

The rapid increase in business system patents in the late 1990s has caused a degree of controversy around the world, particularly in the US and Europe, as well as Australia. Debates have arisen over several issues, such as whether business systems are indeed inventions and therefore patentable, whether patent protection encourages or hinders innovation in this field, and whether IP offices are granting valid business system patents.

There have been several reviews of business system patents, both in Australia and overseas. The Intellectual Property and Competition Review Committee (Ergas

Committee) briefly considered the patenting of business methods in its final report in 2000. The Ergas Committee was not convinced that this area required incentives for innovation. However, it believed that no additional recommendations were needed, since most business methods were expected to fail the general tests for patentability, particularly if such tests were modified as recommended in the report. Subsequent changes to Australian legislation were made, although it is too early to judge their effect. The report also found that Australia has on the whole benefited from the adaptiveness and flexibility of the 'manner of manufacture' test of patentability, rather than the more prescriptive approach of offices such as the European Patent Office.

Reviews conducted by the United States Patent and Trademark Office, the European Patent Office and the Japanese Patent Office have resulted in the introduction of measures to improve the quality of the search and examination processes for business systems. A review of whether patents should be granted for computer software and ways of doing business conducted by the United Kingdom Patent Office in 2001 concluded that business methods should remain unpatentable in the UK.

Australia is obliged under TRIPS to provide patents for business systems that are in a field of technology. ACIP therefore considers the most important issue to be whether it is in Australia's national interest to go beyond the minimum required by TRIPS, and continue to grant patents for business systems that are possibly not in a field of technology.

The exclusive rights provided by patents are an exception to the rule of free competition. A necessary consequence of exclusive rights is the creation of barriers to entry in the market and a stifling of competition. The law must strike a balance between encouragement of innovation and invention disclosure by the grant of a monopoly on the one hand, and freedom of competition on the other. There is a strong argument that unless there is evidence demonstrating a need to spur innovation in a particular field, and in the absence of any international obligation, the default position of free competition should be maintained.

Although evidence was provided to ACIP of patents stimulating greater investment in the research, development and commercialisation of business systems, this was not conclusive. There is also a lack of evidence demonstrating either that business systems are an unsuitable area for patenting, or that allowing the patenting of business systems would stifle competition in new areas of commercial activity.

ACIP considers that there are several ways in which business systems that are not in a field of technology could be excluded from patentability in Australia. One way would be to introduce as a criterion of patentability a requirement that an invention have a 'technical effect'. This would bring Australian patent law closer to patent law in Europe, yet move away from the law in Japan and the US. Another way would be to introduce as a criterion of patentability a requirement that an invention be in a 'field of technology'. This would make Australian patent law share the limitations in TRIPS. Alternatively, the legislature could introduce a specific exclusion for business systems that are not within a field of technology.

The addition of a technical effect or field of technology requirement may involve broad changes to Australia's existing patent law, which was developed before TRIPS became the international norm in 1995. The implications of such changes would largely depend on how the concepts 'in a field of technology' or 'technical effect' are interpreted by

Australian courts. Such changes could foreclose the possibility of patenting new areas of invention until clear economic evidence is available and legislation suitably amended. It is also possible that areas which were previously patentable may cease to be so. Another concern is that such changes may not be effectively implemented, as applicants may work around the legislative provisions by clever claim drafting. The introduction of a specific exclusion on business system patents would have a lesser impact on Australian patent law, as it would be confined to that particular subject matter. However, a term such as 'business system' would also be subject to interpretation, and the European experience is that specific legislative exclusions are even more susceptible to being navigated around by applicants.

ACIP notes that significant changes to Australian patent law, such as those outlined, can involve high transaction costs and can create high levels of uncertainty. Given the potential implications of these factors and the acceptance of the Ergas position that Australia benefits from the adaptiveness and flexibility of the existing test for patentability, ACIP is reluctant to recommend changes that could have unintended and undesirable consequences. Hence ACIP believes that, on balance, the current circumstances do not warrant alteration.

Although this issue generated controversy worldwide, this was not reflected to the same extent in the submissions to this review, which indicate that the issue is not one of great concern in the general Australian business community at this time. A major fear is that business system patents will become pervasive in the business landscape, creating inefficiencies and dampening effects without a corresponding increase in innovation. No examples of Australian enterprises being unfairly hindered by business system patents have been provided to the review, and the overall number of business system patents granted in Australia is still relatively very small. The number affected by the introduction of a requirement to be in a field of technology or have a technical effect would be even smaller, while the impact of such a change on other areas of innovation could be significant. The latest figures give no clear indication of whether the business system field will expand in Australia. Although business system patents are of benefit to some enterprises, they do not appear to be of major economic significance in Australia at this time.

ACIP therefore believes that any adverse impact from a small number of patents for business systems which are not in a field of technology is not sufficient to justify the costs and level of uncertainty involved in removing their patentability. However, the potential exists for such patents to become of such economic significance as to warrant further analysis. ACIP therefore recommends that the situation be closely monitored.

ACIP believes that much of the controversy surrounding business system patents has been a consequence of the relative inexperience of Patent Offices around the world in this new field of patenting. As with other Patent Offices around the world, IP Australia's skills in assessing business system patents have already developed and improved, and will continue to do so over time. However, in light of the submissions to the review, ACIP recommends the introduction of several measures to help ensure the validity of granted patents.

ACIP also recommends measures for raising the awareness of business system patents and IP issues in the Australian business community, and for providing better information services to assist it in managing this new area. It is also recommended that the dampening effect that long application assessment periods can have on business

competitors be considered when IP Australia next reviews its fees and charges. Further increasing the penalties imposed on late responses from applicants should be explored.

3 Recommendations

Recommendation 1

No changes should be made to Australian legislation regarding the issue of patentable subject matter.

Recommendation 2

IP Australia should monitor the number and significance of business system patents in Australia and make a brief annual report to ACIP for the next 5 years, or until ACIP considers this no longer necessary. ACIP should use this information to assess whether circumstances have arisen which necessitate further action on this issue.

Recommendation 3

ACIP encourages IP Australia to make further use of non-patent literature during the examination process, including investigating more cooperation with other IP offices and local industry.

Recommendation 4

IP Australia should further enhance business training for patent examiners who assess business system applications.

Recommendation 5

IP Australia should investigate conducting an education program for SMEs on the IP issues of business systems and electronic commerce in collaboration with the National Office for the Information Economy.

Recommendation 6

IP Australia and the IP profession should actively encourage debate on controversial IP issues in the media.

Recommendation 7

IP Australia should, through its publications and website, raise public awareness of the ability to submit relevant citations under Sections 27 and 28 of the *Patents Act 1990* for specific patent applications.

Recommendation 8

ACIP encourages IP Australia to make the abstracts of all Australian patent applications and grants searchable by text and International Patent Classification on the IP Australia website as soon as possible, beginning with business systems. Preferably this would extend to full text searching of the complete specifications at a later stage.

Recommendation 9

IP Australia should provide on its website search engines an easy to follow process for checking all new patent applications and grants in the International Patent Classification business system class G06F 17/60, and the equivalent class in future editions of the IPC.

Recommendation 10

IP Australia should investigate an improved local classification system for business systems, having particular regard to the European Patent Office's European Classification.

Recommendation 11

When next reviewing its fees and charges IP Australia should consider further increasing response fees due on applicant responses received more than 12 months after an examiner's first report.

4 Review Process

Advisory Council on Intellectual Property

The Advisory Council on Intellectual Property (ACIP) is an independent body established to provide advice to the Minister for Industry, Tourism and Resources and IP Australia on policy and administrative issues associated with intellectual property. The Hon Warren Entsch MP, Parliamentary Secretary to the Minister for Industry, Tourism and Resources has responsibility for intellectual property matters within the portfolio. IP Australia is the federal agency responsible for administering the patent, trade mark and design rights systems.

In response to concerns raised over the patenting of business systems Parliamentary Secretary Entsch requested that ACIP examine the issues and, within the constraints of international obligations, propose policy options that best meet Australia's national interest and the needs of stakeholders.

ACIP circulated an Issues Paper in July 2002 to over 130 small businesses, business organisations and attorney firms in order to stimulate public debate on the issues. Written submissions to the Issues Paper were considered and consultation sessions with interested parties were held in October and November 2002.

Definition of 'Business System'

The term 'business system' (or business method, model, scheme or process) is a generic one and not precisely defined in any jurisdiction. It has been used to describe diverse fields ranging from sporting techniques to managing financial transactions. A clear definition was required to clarify the scope of the ACIP review. With the assistance of the Intellectual Property Research Institute of Australia (IPRIA) the following summarised definition of a business system was developed for the Issues Paper: A business system is a method of operating an enterprise, or of processing financial or management data, in a field of economic endeavour.

This definition encompasses areas such as trade, transacting, finance, resource management, marketing and customer service. Further guidance can be obtained from the business system classification systems listed in **Appendix 3**. ACIP decided to focus on these specific areas as they were perceived to be of most importance and concern. One submission criticised this approach as being so broad as to include other areas such as spreadsheet software and teller machines. Others considered this approach to be too limited in scope because more radical patented subject matter was not being assessed. Areas such as sporting and recreational methods were not the focus of the review, as these were considered largely non-economic and of limited real impact, despite being of a sensational nature. For the purposes of this report, the definition has been reworked to provide more of a general guide:

A business system is a method of operating any aspect of an economic enterprise.

5 Australian Patent System

The main purpose of a patent system is to stimulate industrial invention and innovation by granting limited monopoly rights to inventors in return for full disclosure to the public of the invention, thereby increasing public availability of information on new technology.

Under current Australian patent law (*Patents Act 1990* and associated regulations and case law), a patent may be granted on a new, non-obvious and useful invention, including improved products and processes. The area of exclusivity ('scope') of the patent is defined by the claims of the specification. To be patentable, the claims must satisfy threshold tests required by the Act, the most important of which are:

- the invention must be a 'manner of new manufacture' within the meaning of Section 18 of the Act and relevant case law;
- the invention must be novel in the sense that it has not been previously performed or published;
- for a standard patent, the invention must be inventive and not merely an advance that would be obvious to a person skilled in the field of the invention;
- for an innovation patent, the invention must involve an innovative step, in that there is a difference between the invention and the prior art which makes a substantial contribution to the working of the invention; and
- the invention must be useful.

A patent gives the patentee the exclusive right, during the term of the patent, to 'exploit' the patented invention in Australia, including the right to make, hire, sell, use or import the invention, and/or authorise another person to do so. In Australia, a standard patent lasts for up to 20 years, with a further five year extension possible for pharmaceuticals. Annual renewal fees are payable from the fifth year. An innovation patent may last for up to eight years, with annual renewal fees payable from the second year.

Applications for patents must be filed with the Patent Office, which forms part of IP Australia. The application must fully describe the invention, and state the scope of the desired patent rights. This involves a description of the invention in sufficient detail that a person familiar with the technology ('skilled in the art') could perform the invention without undue experimentation. The description must include the best method known to the applicant for performing the invention. These requirements are often characterised as part of the bargain (*quid pro quo*) between the applicant and society. In return for the applicant's limited exclusive right, society gains through the disclosure of the invention, which allows others to build on the invention or work around it during the exclusion period, and to use it directly after the exclusion period expires.

6 General Background

An effective intellectual property (IP) system is central to building a strong national innovation system, which in turn plays an important role in the Australian economy. IP promotes research and development through helping to better capture returns from commercialising Australian ideas and products.

The emergence of knowledge based economies and globalisation 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 commercialising 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.

Although the patenting of business systems is not new, the rapid development of information technology has created new opportunities for innovation in the business world and led to an increase in the number of patents sought in this area. Applications for business system patents further escalated following the 1998 decision of the US Court of Appeals for the Federal Circuit in *State Street Bank & Trust Co. v Signature Financial Group, Inc.*¹ (*State Street*). This decision made it clear that methods of doing business are inherently patentable under US patent law.

Measurement of business system patent activity is necessarily approximate due to the imprecise definition of the field and the limitations of patent office classification systems. The United States Patent and Trade Mark Office (USPTO) received 330 business system patent applications in 1995, increasing to 2821 received in 1999, 7800 in 2000, 8700 in 2001 and an estimated 5000 in 2002. These latest figures show a dramatic rise and fall over the last few years. Figures for US granted business system patents similarly show a significant rise, dramatic fall and possible stabilisation, with 585 granted in 1999, 899 in 2000, 433 in 2001 and an estimated 492 in 2002².

In Japan, applications for business systems jumped from 4100 in 1999 to 19000 in 2000. The numbers appear to have peaked in late 2000 and since gradually decreased, with 18000 applications received in 2001. Despite the large number of applications, only 246 business system patents were granted in FY2001³.

IP Australia received 23 'active' business system patent applications in 1995, rising to 265 received in 2000 and 430 received in 2001. 'Active' applications are those which are being actively pursued, and comprise applications directly filed in Australia and those filed internationally through the Patent Cooperation Treaty (PCT) which have subsequently entered the national phase in Australia. PCT applications that have designated Australia, but not yet entered the national phase, are considered to be still 'inactive'. Because the majority of these never enter the national phase it is inappropriate to include them in the total number of applications. PCT applicants have 31 months from the priority date in which to enter the national phase. As a result, the figures for 'active'

¹ *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* 149 F.3d 1368 (Fed. Cir. July 23, 1998).

² Office of External Affairs, United States Patent and Trade Mark Office, December 2002.

³ Proceedings of the International Forum on the Protection of Computer-related and Business Model Inventions, EPO International Academy, Munich, November 2002, "*Examination Practice at the Japan Patent Office*" pp 66-86.

applications take significant time to be finalised, and useful application figures for 2002 are not yet possible. The number of granted patents rose from a handful in 1995 to 61 in 2000, 47 in 2001, 68 in 2002 and 56 so far in 2003⁴. These figures include a handful of certified Innovation patents, but do not include around 60 Innovation patents which have been sealed (unexamined) since 2001. When sealed Innovations patents are included, close to 40% of business system patents are granted to Australian applicants, much higher than the 10% average for all technologies and patent types.

For both Australia and the US, business systems still comprise only a small proportion of the total number of patent applications filed and granted (0.3-0.4%). Although business system applications comprise a significant 4% of total applications in Japan, granted business system patents only make up approximately 0.2% of all patents granted.

The increase in business system patents has caused considerable controversy around the world, particularly in the US, Europe and Australia. Debates have arisen over several issues, such as whether business systems are indeed inventions and therefore patentable; whether patent protection encourages innovation in this field; and whether IP offices are granting valid business system patents.

⁴ IP Australia, Strategy and Projects, September 2003.

7 Legal Background

7.1 *International Agreements*

7.1.1 TRIPS

The World Trade Organisation Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) provides minimum standards of IP protection. Member countries such as Australia are free to determine the appropriate method of implementing the provisions of TRIPS within their own legal system and practice. Article 27(1) provides that patents shall be available for any inventions in all fields of technology provided they are new, involve an inventive step and are capable of industrial application. Article 27(1) also specifically prohibits discrimination according to the field of technology. Article 27(2) does however allow inventions to be excluded from patentability for the protection of public order or morality. In addition, Article 27(3) allows the exclusion of the following subjects:

- the treatment of humans or animals
- plants and animals other than micro-organisms
- biological processes for the production of plants and animals, other than non-biological and microbiological processes.

Although business system patents might not be specifically excluded under Articles 27(2) and (3), business systems could be excluded from patentability if they are not considered within a ‘field of technology’ and therefore subject to mandatory patentability under Article 27(1). Thus, to the extent that a business system is not considered to be in a field of technology, there is no obligation under the TRIPS Agreement to provide it with patent protection.

7.1.2 Harmonisation of International IP Laws

Global commerce is hampered by the patchwork of inconsistent regulations across national boundaries. Governments face the challenge of ensuring patent systems function harmoniously in increasingly internationalised marketplaces. Regional collaboration in industrial property administration is increasingly common, with the main aims being to reduce the administrative burden resulting from dramatic increases in patent filings, to ensure cost-effective IP systems for users, and to foster trade and investment.

Collaboration on legal harmonisation of IP administration is well established through structures such as regional trade agreements, the European Patent Office (EPO), and the PCT. More recent important developments include the TRIPS agreement (1995), the Patent Law Treaty (2000), the draft Substantive Patent Law Treaty, the strengthening of arrangements between the Trilateral Patent Offices - the USPTO, the EPO, and the Japanese Patent Office (JPO) - and the continuing debate on the patentability of areas such as human genes, software and business methods. Users of the patent system have pressed for unified standards and procedures in order to reduce the costs of obtaining and enforcing patent rights worldwide. Significant harmonisation of IP laws has already occurred, but major sticking points still remain, such as:

- most countries do not develop technology locally and instead are large net importers of technology, meaning that regional patent rights increase the cost of products locally without fostering local innovation - refer to Section 7.2;
- the US first-to-invent system versus the first-to-file system used by the rest of the world;
- patentable subject matter, including software, human genes, treatment of humans and business methods. A proposed Directive of the European Commission (EC) aims to end different European practices regarding the patentability of computer-implemented inventions, such as software and business methods. Refer to Section 7.2.3.

7.2 National Legislation

The patentability of business systems varies between jurisdictions, depending on the manner in which they are claimed. The legislative provisions that are relevant to the patenting of business systems are the scope of patentable subject matter and the requirement of sufficiency. Patentability is relevant, as business systems are not considered patentable in some jurisdictions. Sufficiency is relevant, because to be patentable a business system must be described in sufficient detail to satisfy the requirement that the invention is not merely an abstract concept - a mere scheme or plan. In Australia applications for business systems generally satisfy this requirement because applications for very broad concepts are rare. In the majority of applications the general concept is applied in a specific manner in an economic environment, and so is not regarded as abstract.

The Commission on Intellectual Property Rights established by the British government in May 2001 published a report in September 2002 entitled *Integrating Intellectual Property Rights and Development Policy*⁵. The Commission found that IP does not necessarily benefit developing countries and recommended that developing countries should provide pro-competitive patent systems by restricting the scope of patent protection. Thus, it was recommended that developing countries exclude certain subject matters from patentability, including business systems.

Broadly speaking, business systems may be considered patentable in the US, Japan and Australia, but not patentable in Europe, due to their explicit exclusion. It is argued, however, that in practice business systems are also patentable in Europe with appropriate wording of claims. Each of these jurisdictions shall be covered in more detail below.

7.2.1 Australia

Patentability

Under the *Patents Act 1990*, for a subject matter to be patentable it must be “any manner of new manufacture the subject of letters patent and grant of privilege within section 6 of the Statute of Monopolies” (Section 18(1)(a)). For standard patents the only exclusion to

⁵ *Integrating Intellectual Property Rights and Development Policy*, Report of the Commission on Intellectual Property Rights, London, September 2002, http://www.iprcommission.org/graphic/documents/final_report.htm

patentable subject matter is for human beings and the biological processes for their generation. Innovation patents have additional exclusions for plants and animals. Case law outlines other areas as inherently unpatentable, with one such area concerning abstract concepts (that is, discoveries, ideas, scientific theories, laws of nature, mere schemes or plans).

The test which applies in modern Australian patent law is from the 1959 High Court of Australia decision of *National Research and Development Corporation v. Commissioner of Patents (NRDC)*⁶. The High Court set the requirement which a subject matter must satisfy so as to be a ‘manner of new manufacture’ as: “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 *NRDC*, the High Court expressly identified as unpatentable “abstract information without any suggestion of a practical application of it to a useful end”. The High Court also found that the correct approach to patentability was not to attempt a precise definition of ‘manufacture’, but to consider whether an invention is patentable according to traditional principles.

In light of the principles laid down by such cases as the 1902 UK decision of the Attorney-General in *Coopers Application*⁷, IP Australia’s interpretation of *NRDC*, until recently, was that an invention must be technically implemented, that is, have a means for putting it into effect, in order to satisfy the requirement of an “artificially created state of affairs”. It has been argued that this requirement has little practical effect, as almost any manner of implementation is considered sufficient. In the case of business systems computer implementation is standard so the implementation requirement is not a limiting factor.

In 2001, the judgement of the Federal Court in *Welcome Real-Time SA v. Catuity Inc*⁸ found the US *State Street* decision on business systems to be persuasive, in that business systems should be subject to the same requirements as any other invention. The Federal Court also threw doubt on whether a physical aspect was necessary for an invention to be patentable.

In 2001, IP Australia revised its examination practices regarding business systems in response to the *Welcome Real-Time* decision. The *Australian Patent Office Manual of Practice and Procedure Volume 2 - National* was modified to reflect that it is no longer the practice of IP Australia to require an invention to have a technical means of implementation to be patentable, as there is no explicit requirement for this in Australian law. Business systems may still be opposed according to the traditional principle of mere schemes, plans and ideas not being patentable, and must satisfy the normal requirements of novelty and inventiveness.

Increased Presumption of Validity

Changes to Australian patent legislation were introduced on 1 April 2002 in response to recommendations made by the Intellectual Property and Competition Review Committee

⁶ *National Research and Development Corporation v Commissioner of Patents*, (1959) 102 CLR 252, (1961) RPC 134, 1A IPR 63.

⁷ *Cooper’s Application* (1902) 19 RPC 53.

⁸ *Welcome Real-Time SA v Catuity Inc* [2001] FCA 445.

(see Section 8.1.1). The aim of the changes was to increase the presumption of validity of granted patents and bring Australian practice more into line with international standards. They include the following:

- the Commissioner must be satisfied that an invention meets the criteria on the balance of probabilities, rather than giving the benefit of any doubt to the applicant;
- two or more documents may be combined for inventive step purposes if the person skilled in the art “could be reasonably expected to have ascertained, understood, regarded as relevant and combined the information”⁹;
- applicants are required to inform the Commissioner of the results of any documentary searches conducted prior to the grant of the patent. The Intellectual Property Laws Amendment Bill 2002 was introduced into Parliament in Autumn 2003. The proposed amendments would require applicants to provide only those search results supplied by a foreign IP office.

Sufficiency and Fair Basis

Under Section 40 of the *Patents Act 1990* a patent application must describe the invention fully, including the best method known to the applicant of performing the invention, and the claims must be fairly based on the matter described in the specification.

Fair basis is an important issue due to the potential for business systems to be broad in scope and affect a wide variety of industries. In order for a claim to be fairly based there must be a real and reasonably clear disclosure of its subject matter in the specification as read by a person skilled in the art and in light of the common general knowledge. A claim is considered not fairly based if it goes beyond the disclosure in the description, or is not restricted by features which the description represents as essential.

Compulsory Licensing

Under Sections 133-140 of the *Patents Act 1990* a patentee may be ordered by a court to grant a person a licence to work the patented invention. To make such an order the court must be satisfied that person has tried to obtain a licence on reasonable terms and conditions, that the reasonable requirements of the public with respect to the invention have not been satisfied, and that the patentee has given no satisfactory reason for failing to exploit the invention. Terms are determined by the court if the patentee and the person cannot reach agreement.

Compulsory licences are relevant to business system patents due to their potential to address the concern that patenting of fundamental business processes may have serious adverse effects, such as blocking new entrants and increasing costs without a corresponding increase in innovation. Compulsory licences have in fact never been granted in Australia. Nonetheless it is argued that compulsory licenses have a continuing impact on licence negotiations, notably between foreign rights owners and potential users of patents in Australia. It is claimed the threat of compulsory licences often encourages parties to reach agreement where they otherwise would not have.

⁹ *Patents Act 1990*, Section 7(3).

The Ergas report found the conditions under which compulsory licences may be ordered to be concerned with the promotion of domestic industry, rather than with achieving high productivity and the best use of resources. The report recommended amendments which would ensure that orders for compulsory licences are obtained through the Australian Competition Tribunal and are based on competition principles. Formulation of suitable legislative amendments is expected to begin in 2003.

Public Comments and Oppositions

According to Sections 27 and 28 of the *Patents Act 1990*, once an application is published and before it is accepted (for standard patents) or certified (for innovation patents), any person may notify the Commissioner of Patents that the person believes the invention is not novel or inventive/innovative. Such notices and any accompanying documents are considered as part of the examination process. IP Australia rarely receives such notices. This may be partly due to the resources required to monitor published applications.

Once a standard application is examined and considered to have met the necessary criteria, then it is accepted and published again. The granting of the patent is delayed for three months during which, under Chapter 5 of *Patents Act 1990*, any person may oppose the grant of a patent on several grounds, including novelty and inventive step. If no opposition is filed then the application proceeds to grant. Approximately 2-3% of accepted applications are opposed. An opposition may be decided on the basis of written submissions only, or at the request of one of the parties, by a hearing conducted by a delegate of the Commissioner of Patents. Decisions of the Patent Office, depending on their type, can be appealed to the courts or to administrative tribunals.

Re-examination

Chapter 9 of the *Patents Act 1990* provides for re-examination of applications and granted standard patents and Section 101G provides for re-examination of certified innovation patents. This may only be undertaken on the grounds that the invention is not novel or not inventive/innovative. Re-examination is instigated at the Commissioner's discretion, upon request by any interested person or at the direction of a prescribed court before which the validity of the patent in question is in dispute. Re-examination may lead to refusal to grant a patent, or revocation of a granted patent. In recent years there have been only about two or three re-examinations per year.

7.2.2 United States

Patentability

Under US law, to be eligible for a patent an invention must be "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof" (35 USC § 101). Abstract ideas are one of the categories of subject matter considered to be not patentable. Although the USPTO has been granting a small number of business system patents for many years, the traditional view of the US courts has been that business systems were abstract ideas and therefore not patentable. This approach changed in 1998, with the decision of the US Court of Appeals for the Federal Circuit in *State Street*. In this decision it was made clear that methods of doing business

were inherently patentable under US law if they produced a useful, concrete and tangible result, and so were not merely abstract ideas.

Public and Industry Feedback

In the US, the public may provide to the USPTO patents and publications relevant to the patentability of published patent applications within two months from the date of publication of the application, or prior to the mailing of the notice of allowance, whichever occurs first. A member of the public may also through a protest procedure submit other information relevant to a pending application prior to the date of publication or the mailing of the notice of allowance, whichever occurs first.

One of the initiatives from the *Business Methods White Paper* (see Section 8.2.1 below) was to invite input from the public to help identify additional sources of prior art for use by the USPTO.

Sufficiency

Under US law, a specification must contain a written description of the invention in such full, clear, concise and exact terms as to enable any person skilled in the art to make and use it. The best mode of operation must also be included (35 USC §112).

7.2.3 Europe (including the United Kingdom)

Patentability

The EPO conducts a single examination process for a European application on behalf of the 20 contracting states of the European Patent Convention (EPC). According to the Implementing Regulations of the EPC (Rules 27 and 29), in order to be patentable an invention must be of a technical character. Thus, an invention must relate to a technical field, be concerned with a technical problem, and have technical features. Methods of doing business “as such” are excluded from patentability pursuant to Article 52(2)(c) and (3) EPC.

The EPO Board of Appeal decision *Pension Benefits Systems Partnership* of September 2000¹⁰ confirmed that having technical character is an implicit requirement of patentability to be met by an invention in order to be an invention under Article 52(1) of the EPC. In the *Pension Benefits* case the Board distinguished between the patentability of a method compared with an apparatus because the specific wording of Art 52(2) excludes “schemes, rules and methods” but does not exclude “apparatuses”. The method claim concerned the use of technical means (a computer system), but this did not confer a technical character to the claimed steps of processing and producing information of purely administrative, actuarial and/or financial character, and so was excluded from patentability. For the apparatus claim, the Board found that a “computer system suitably programmed for use in a particular field, even if that is the field of business and economy, has the character of a concrete apparatus in the sense of a physical entity” and is thus an invention within the meaning of Art. 52(1) EPC. The claim was nonetheless rejected as lacking an inventive step because the improvement claimed was essentially an economic one. Such a claim cannot contribute to the requirement for an inventive step, because the application of computer systems to the economic sector is already a general phenomenon.

¹⁰ European Patent Office Board of Appeal Decision T 931/95, *Pension Benefits Systems Partnership*

In practice, business related innovations may constitute patentable subject matter under the EPC if the claims are crafted to define the invention as a computer implemented system which makes a technical contribution to the state of the prior art.

The United Kingdom has legislation consistent with the EPC. The English Court of Appeal 1989 decision of *Merrill Lynch's Application*¹¹ found there must be some technical advance on the prior art for a business system to be patentable. The 1996 *Fujitsu Limited's Application*¹² decision found that an excluded subject may be made patentable if there is a technical contribution.

European Commission Directive

Some differences in practice exist between European nations regarding the patentability of computer-implemented inventions such as software and business systems. A proposed EC Directive aims to resolve these inconsistencies by requiring that, in order to be patentable, an invention that is implemented through the execution of software on a computer or similar apparatus has to make a contribution in a technical field that is not obvious to a person of normal skill in that field. This follows the *Pension Benefits* decision in that computer-implemented inventions are regarded as being in a field of technology, but a non-obvious technical contribution is also required.

Amendment to the European Patent Convention

Article 52(1) EPC was revised by the Diplomatic Conference of Munich in 2000 to read "European patents shall be granted for any inventions, *in all fields of technology*, provided they are new, involve an inventive step and are susceptible of industrial application". The new provisions do not enter into force until they have been ratified by the parliaments of the member states.

Sufficiency

According to Rule 27 of the Implementing Regulations of the EPC, the description must specify the technical field and background art of the invention (preferably citing documents) and disclose the invention such that the technical problem and solution can be understood. At least one way of carrying out the invention must be disclosed, and the manner of exploitation in industry made clear.

7.2.4 Japan

Patentability

Under Japanese law a patentable subject matter is "a technical idea utilising a law of nature" (Article 2(1)). Arrangements arbitrarily made by human beings or mental activities which have no technical nature are not patentable because they do not utilise a law of nature. Under the practice of the JPO, business methods are regarded as 'software related' inventions, and are patentable if they have a technical nature, such as involving information technology.

Disclosure of Prior Art

Due to an increasing number of applications and corresponding pressure to provide prompt, rigorous examination, as of July 2002 the JPO requires patent specifications to disclose relevant prior art documents known to the applicant at the time of filing.

¹¹ *Merrill Lynch's Application*, [1989] RPC 561, English Court of Appeal.

¹² *Fujitsu Limited's Application*, [1997] RPC 608, English Court of Appeal.

8 Related Reviews & Practices

8.1 Australian Patent Office

8.1.1 Intellectual Property and Competition Review

The Intellectual Property and Competition Review Committee (IPCRC) was established by the Minister for Industry, Science and Resources and the Attorney-General pursuant to the Competition Principles Agreement between the Commonwealth government and the State governments. The Competition Principles Agreement requires that all legislation that has the potential to restrict competition should be subject to periodic review. The IPCRC submitted its final report, *Review of Intellectual Property Legislation under the Competition Principles Agreement* (the Ergas report) to the government in September 2000.

The report briefly considered the patenting of business methods. The Committee was not convinced that this area required incentives for innovation, however it believed that no additional recommendations were needed since most business methods were expected to fail the general tests for patentability, particularly if such tests were modified as recommended in the report. Subsequent changes to Australian legislation are outlined in Section 7.2.1. The Ergas report also found that Australia has on the whole benefited from the adaptiveness and flexibility of the 'manner of manufacture' test of patentability, rather than the more prescriptive approach of offices such as the EPO.

8.2 United States Patent and Trademark Office

8.2.1 Business Methods White Paper

In March 2000, the USPTO announced a plan to improve the quality of the examination process in electronic commerce and business system technologies, the *Business Methods White Paper*¹³, in response to increased public attention to the Office's operations relating to these technologies. New or expanded measures included:

- increasing the number of patent examiners with at least three years of business industry work experience, such as in banking, finance, marketing, real estate, management, sales and insurance;
- training for examiners in the current trends in electronic business practice;
- provision of business practice specialists to serve as resources for examiners on common industry practices, terminology and standards. The USPTO has found such specialists provide valuable technical and procedural expertise. The duties of the position include providing assistance with searching, claim interpretation, analysis of attorney arguments, participation in review and appeal conferences, and providing examiner training;

¹³ *Business Methods White Paper*, USPTO, 29 March 2000, <http://www.uspto.gov/web/menu/busmethp/index.html>

- the founding of a Scientific and Technical Information Centre and an Electronic Information Centre to provide professional search and library support for examiners to find literature distributed throughout a diverse range of sources;
- continued expansion of the numbers of mandatory non-patent literature databases to be used by searchers and examiners, including the creation of a database of prior art submitted by applicants in Information Disclosure Statements. In June 2001 input was requested from the public to help identify additional sources, and multiple submission have been evaluated to date. It is not clear whether this initiative will be affected by plans to reduce the prior art burden on examiners announced in *The 21st Century Strategic Plan* of June 2002 (see Section 8.2.2);
- routine in-process reviews by supervisors of business system applications after the first office action;
- a second level review of all allowed business system (Class 705) applications. According to the USPTO this process has been extremely successful by reducing to less than 1% the number of allowed business system applications which are returned from the Office of Patent Quality Review due to containing an error. This initiative was subsequently included as one of several office wide quality initiatives in *The 21st Century Strategic Plan*; and
- formation of Customer Partnerships to address examination performance. This has involved three meetings to date through which mutual concerns, problems and possible solutions have been discussed between the USPTO and over 30 customer organisations. Many partnership organisations have provided examiner training on search strategies and contributed prior art collections¹⁴.

8.2.2 The 21st Century Strategic Plan

In June 2002, the USPTO released an outline of fundamental changes to the organisation's objectives and practices, *The 21st Century Strategic Plan*. This plan is in response to dramatic increases in patent application filings throughout the world and the subsequent challenges to examination timeliness and quality. The plan encompasses all areas of technology, and may have significant impact on business system patents. *The 21st Century Strategic Plan* is still in the process of formulation. Implementation of proposals will begin once the plan is final. An updated version taking into account feedback received from key stakeholders was released in February 2003¹⁵.

The major aims of the plan include enhancing the quality of examination operations, avoiding duplication of work among IP offices and accelerating processing times. These aims will be achieved through initiatives such as the following:

- increased harmonisation of international IP laws and standards;
- electronic automation of USPTO and international systems and the reorganisation of USPTO work concepts and structures. This includes increasing freedom of choice for customers, such as by introducing the option of an accelerated examination path. Greater examiner productivity will be achieved by reducing the numbers of claims in applications, and reducing the prior art search burden;
- increased reliance on the private sector and other IP organisations for patent classification and search results. The USPTO will concentrate on core government

¹⁴ Additional White Paper information: Office of External Affairs, United States Patent and Trade Mark Office, December 2002.

¹⁵ *The 21st Century Strategic Plan*, USPTO, 3 February 2003, http://www.uspto.gov/web/offices/com/strat21/stratplan_03feb2003.pdf

functions such as examination. Long term plans include possible mutual exploitation of examination results between IP organisations; and

- improving quality assurance techniques, such as expanding various review processes (including post-grant), particularly for more advanced technologies, and monitoring the quality of newly created searching authorities. Examination staff competencies will be enhanced, such as through the re-certification of examiner skills. Long term plans include evaluating the reinstatement of corporate sponsorship of examiner training in technological developments.

8.3 United Kingdom Patent Office

In March 2001, the United Kingdom Patent Office (UKPO) released the results of a consultation exercise entitled "*Should Patents Be Granted for Computer Software or Ways of Doing Business?*"¹⁶ which attracted substantial interest and input from interested parties. The main conclusions were:

- there should be no significant change to the patentability of software;
- the law is not clear on when software forms part of a technological invention and is therefore patentable, and urgent European action is needed to clarify this;
- business methods should remain unpatentable.

It was argued that patents evolved in manufacturing industries in order to provide incentive for innovation. Without patent protection, innovation would be weakened by the risk that rivals could easily copy inventions without incurring the expensive development costs themselves. The many costs associated with patents have caused them to be limited to those fields where the benefits outweigh the disadvantages, that is, technological inventions. Ways of doing business and computer software as such were not considered to be inventions as they are not overtly 'technical' and do not necessarily exhibit a 'technical effect'.

Business systems were traditionally not thought capable or worthy of patent protection because they do not involve an aspect of traditional technology. The advantages of stealing a march on competitors, albeit temporarily, provide enough incentive for development of business systems. Also the nature of business system patents can lead to very wide patents which affect many different sectors. It was considered that new technologies have not changed this argument. Innovation was thought a feature of competition in business systems as companies strive for competitive advantage. Copying of business systems can spur new ones to gain advantage, whereas patents could reduce innovation and consumer choice.

The conclusion of the review was that those who favoured some form of patentability for business systems had not provided the necessary evidence that patents would increase innovation. However, interestingly there was no sign of a want of innovation in computer implemented business systems, including in the US, before business systems officially became patentable in 1998.

¹⁶ "*Should Patents Be Granted for Computer Software or Ways of Doing Business?*" March 2001, UKPO, <http://www.patent.gov.uk/about/consultations/conclusions.htm>

8.4 European Patent Office

8.4.1 International Academy Forum on the Protection of Computer-related and Business Model Inventions

An international forum on the protection of computer-related and business model inventions was held by the EPO International Academy in November 2002 in order to exchange information and share experiences on the issue. A large portion of the forum dealt in detail with the current practices of various IP offices, including the meaning of ‘technical character’ in Europe. Other main issues covered during the forum included:

- *The EC Directive on computer-related and business model inventions.*
The main concerns with this proposal included how ‘technical contribution’ is assessed, whether any attempt to define ‘technical’ should be made, and whether computer program products should be patentable;
- *The need for more economic debate and analysis on business system patents.*
Compared with the volume of legal analysis, there has been relatively little discussion of the reasons behind the European tradition of only technical inventions being patentable. The UKPO presented the results of its 2001 review (refer to Section 8.3). The German Patent and Trademark Office argued that e-commerce business systems were patentable subject matter because they relate to technical processes or devices, however pure business systems are not patentable because they do not call for the planned employment of natural forces. As a result they contradict a basic condition for patent protection - protection for capital expenditures. The Eurolinux Alliance, an open source group, argued that the only justification for patents lies in economic analysis which shows patents have lasting positive effects in a given sector;
- *Software patents.*
Research in the European software industry by the Fraunhofer Institute for Systems and Innovation Research found that obstacles to conducting development work, such as patents, have even more impact in the software sector than other branches of the economy. IP rights are the least important form of protection to software innovators, and most in the industry are wary and sceptical of the widespread patenting of software. IBM argued that although patents are not intended for abstract ideas or business methods, software has technical character and should be patentable. A program’s essential characteristic is the technical functionality represented in the instructions for the computer, and in this way is no different to specialised hardware.

8.4.2 2001 Amendments

In August 2001, the EPO amended the examination guidelines regarding patenting of business systems and computer related inventions following several Board of Appeal decisions, including the *Pension Benefits Systems Partnership* (2000) and *IBM* (1998)¹⁷. The revised guidelines restate the essence of the *Pension Benefits* decision and specify that although methods for doing business and programs for computers are “as such” explicitly excluded from patentability, a product or a method which is of a technical character may be patentable. However, in the case of a method claim, the specification of a technical means for a purely non technical purpose does not necessarily confer a

¹⁷ European Patent Office, Technical Board of Appeal Decision T1173/97, *IBM*.

technical character onto an invention. In assessing the requirement for inventive step, the examiner must establish an objective technical problem that has been overcome by the claim. The solution of the technical problem would constitute the invention's technical contribution to the art and would mean that the subject matter of the invention was patentable under Art. 52(1).

Where the subject matter specifies an apparatus that is a computer program, the apparatus claim should be examined as a computer implemented invention. The guidelines also incorporate the findings of the *IBM* case and state that a computer-implemented invention will be patentable if it causes a technical effect beyond the normal physical interactions between programs and computers (such as electric currents), regardless of whether the technical effect is known in the prior art. Therefore, a computer implemented business method will be patentable if it makes a contribution to the state of the art in a technical field. However, as stated by the Board of Appeal in *Pension Benefits*, an economic improvement does not constitute a technical contribution to the state of the art.

8.5 Trilateral Offices

The Trilateral Cooperation of the EPO, the JPO and the USPTO was formed in 1983 to exchange information and views on patent administration and examination practice in order to gain mutual benefits. In June 2000, the Trilateral Offices released the results of a study on business method related inventions entitled *Report on Comparative Study Carried Out under Trilateral Project B3b*¹⁸. This report concluded that the mere automation of a known human transaction process using well known automation techniques was not patentable, and that a technical aspect was necessary for a computer-implemented business method to be patentable, although this aspect need only be implicit in US claims. It was recognised that the Trilateral Offices should next focus on collaboration of searching prior art in the business method field.

In November 2001 the Trilateral Offices released the results of a study of search tools and strategies entitled *Trilateral Project B3a, Exchange of Search Results, Report on Concurrent Search Program using PCT Applications for Business Method-related Inventions*¹⁹. The purpose of the program was to promote mutual understanding of search sources, tools and strategies used by the Trilateral Offices in the business method field, and to explore improving the quality of searches.

The report concluded that although search tools and strategies differed, each Office's ability to search the prior art for business method inventions was satisfactory, as each was able to find relevant prior art for all of the PCT applications. However the study found that it would be useful for the JPO to search US, World Intellectual Property Organisation (WIPO) and EPO databases using the United States Classification (USC) and European Classification (ECLA), particularly when the JPO is unable to find relevant art from Japanese language literature. Similarly, the other two Offices cited no Japanese patent literature. The report therefore concluded that it would be useful for the

¹⁸ *Report on Comparative Study Carried Out under Trilateral Project B3b*, Trilateral Technical Meeting, June 14-16, 2000, Tokyo, JPO, http://www.european-patent-office.org/tws/b3b_start_page.htm

¹⁹ *Trilateral Project B3a, Exchange of Search Results, Report on Concurrent Search Program using PCT Applications for Business Method-related Inventions*, November 5-9, 2001, San Francisco, California, http://www.jpo.go.jp/saikine/tws/business/business_start_page.htm

USPTO and EPO to use the JPO database, particularly when searching for inventions whose background is unique to Japan. The percentage of non-patent literature (NPL) cited was not high for any of the Offices, and the report concluded that it would be helpful to further exchange NPL searching information.

8.6 Japanese Patent Office

In November 2000, the JPO released its new policies on business system patents entitled *Policies concerning Business Method Patents*²⁰. These included:

- clarification of examination standards;
- the expansion and improvement of business related databases, including the seeking of non-patent information from industry;
- exchanging information on non-patent literature databases between the Trilateral Offices;
- aiming for consistent patentability between the Trilateral Offices;
- establishing a user-friendly search system for applicants using new business system classifications; and
- utilisation of experts from external organisations and relevant examiner training.

8.7 New Zealand Ministry of Economic Development

In March 2000, the New Zealand Ministry of Economic Development, Regulatory and Competition Policy Branch began a review of the Patents Act 1953. The patenting of business systems formed an important part of this review. A discussion paper was released in March 2002²¹, with most of the issues raised concerning business systems very similar to those in this report.

In July 2003 the New Zealand government agreed to proposals arising from the review, with the expectation that associated legislation will be introduced into parliament early in 2004. The Australian definition of a patentable invention as a manner of manufacture is to be adopted. This will retain current judicial exclusions, while allowing the courts the flexibility to develop the definition on a case by case basis. This will also enable Australian court decisions to be used as a guide by the Intellectual Property Office of New Zealand and the New Zealand courts.

The New Zealand Patents Act 1953 currently does not specifically exclude the granting of patents for business systems. It was found that most of the controversy on this issue has centred on whether patents granted for business systems have been novel or inventive. As this is a matter of whether current legislation is being effectively implemented, the government agreed that business systems should continue to be patentable as long as they meet the requirements for patentability.

²⁰ *Policies concerning Business Method Patents*, November 2000, JPO, <http://www.jpo.go.jp/infoe/tt1211-056.htm>

²¹ *Review of the Patents Act 1953: Boundaries to Patentability, A Discussion Paper*, Ministry of Economic Development, Regulatory and Competition Policy Branch, March 2002
http://www.med.govt.nz/buslt/int_prop/patentsreview/

9 Submissions to the Review

9.1 Significance of Business Systems

9.1.1 Background

It would be inappropriate to expend significant resources on investigating and addressing any problems with business system patents if the issue is of only minor economic and IP significance.

The considerable worldwide controversy surrounding business system patents strongly suggests the issue is one of importance. These concerns are evidenced by the major steps taken by the USPTO and other offices to address issues of validity and processing timeliness of business system patents, voluminous discussion in IP literature, and articles in the general media. There is however the possibility that public perception of some of the issues is not in proportion with actual events.

Despite recent large increases, granted business system patents still form only a very small proportion of the total number of patents granted in both the US (0.3 %) and Australia (0.4 %). US figures show applications for business system patents experienced a significant slow down in growth in 2001, and a large contraction is estimated for the fiscal year 2002. This may be due to a number of economic factors including the decline in the internet sector of the US economy and computer based business systems being a new area of innovation and so characterised by a short term 'gold rush' in patenting.

The corresponding sharp fall in US granted patents is possibly also due to increased scrutiny of business method patents, resulting in longer assessment periods and a drop in the acceptance rate from 57% to 45%. Australian applications continued to grow rapidly in 2001, however the number of granted patents appears to have stabilised. This may, however, be due to temporary economic effects, and may be partly due to IP Australia's resources having been temporarily directed to a substantial rise in higher priority international work, resulting in fewer national applications being assessed.

The relatively small numbers may belie the importance of business system patents, as there is clearly a potential for wider impact and scope than other types of inventions. For example, whereas most patents are restricted to a specific technological field such as mining or biotechnology, a patented method of managing personnel has the potential to impact on enterprises operating in any field. It is arguable that business systems form an overarching category of subject matter due to patents only being granted for inventions within a field of economic endeavour.

In 2003 there was considerable controversy in Australia over a patent application by DE Technologies for a method of international shopping on the internet. Some believed that the patent had the potential to impact on a large number of Australian businesses conducting electronic sales via their websites. Details of this case are outlined in Appendix 4. The DE Technologies patent is an example of the kind of patent which ACIP recommends be monitored under Recommendation 2 to assess whether there are significant detrimental effects on innovation and business.

9.1.2 Discussion of Views

While several strongly opposing views were expressed on the question of the significance of business systems, the majority of the submissions received by ACIP expressed the belief that although business system patent activity is currently static and susceptible to boom/bust cycles in information technology industries, business system patents are very important for encouraging new sectors of the Australian economy. This was thought particularly the case in financial and internet-based industries. Business system patents were said to be vital for Australian small to medium enterprises (SMEs), particularly as protection for easily copied ideas, for attracting venture capital, and for establishing local success prior to expanding into overseas markets²². Interestingly it was also submitted that business system patents were not significant factors in the considerations of venture capitalists due to the high risk of such patents being found invalid, or able to be worked around²³.

Several of the submissions also held the view that any fear of business system patents adversely impacting on the daily operations and IP strategies of most Australian businesses is unwarranted. The increase in business system patents is beginning to slow, and it was put forward that most business system patents are for quite specific and sophisticated concepts which would not be applicable to the wider community²⁴. Another view submitted was that it is uncommon for large organisations to threaten small potential infringers with ambit claims due to the expense and unpredictability of court action²⁵.

An important opposing view²⁶ expressed to ACIP was that business system patents could become significant due to the increasing importance of service industries in the economy and the tendency for business system patents to affect the operations of all types of enterprises with little experience in IP. There was a concern that the expansion of business system patents would require Australian enterprises of all sizes to divert valuable resources from core business to the inefficient, difficult and expensive area of managing the IP aspects of what have until recently been considered normal, everyday advances in business practice. Increased costs would be passed on to consumers with little corresponding increase in innovation.

This submission also suggested businesses which currently hold business system patents in high regard would in time probably be disappointed by their ineffectiveness in the marketplace, and small players would have difficulty enforcing business system patents in the courts.

One submission suggested that although there was no evidence of negative effects from the patenting of business systems, the issue can only be assessed using hard economic facts, not theories²⁷.

²² Australian Information Industry Association, Craig Auwardt, Bill Duncan, Australian Federation of Intellectual Property Attorneys, Griffith Hack, Davies Collison Cave, Institute of Patent and Trade Mark Attorneys of Australia.

²³ Australian Venture Capital Association.

²⁴ Institute of Patent and Trade Mark Attorneys of Australia.

²⁵ John Swinson

²⁶ Australian Consumers' Association.

²⁷ Law Council of Australia.

9.2 *Encouragement of Innovation and Dissemination of Knowledge*

9.2.1 Background

The fundamental aims of the patent system include the encouragement of research and development and the diffusion of technology. One argument is that appropriate protection of business methods will contribute to development in information technology and e-commerce. It has been argued that history shows a pattern of new areas such as pure processes, treatment of humans, living organisms and computer software being controversial when first patented, but soon becoming accepted standards.

The counter argument is that the nature of business is such that many innovative business methods would have been developed without the incentive of exclusive rights, and that information on new business methods would be disseminated anyway because they are practiced in public. It is questioned whether business method patents actually encourage innovation, or affect the profitability and market value of enterprises. It has been suggested factors such as lead times, network effects, customer loyalty, business structure and culture are far more significant. The patent system has evolved in the context of traditional manufacturing industries, and it has been argued that business management and services industries have different requirements of the IP system.

It has also been argued that business method patents threaten the development of the internet and e-commerce because the monopolisation of important aspects of communication and commerce is antithetical to the free and open development of the world wide web. This is particularly an issue if patented technology is included in standards adopted to ensure the interoperability of web platforms. The argument is that the web has prospered to date due to the free sharing of knowledge, and that innovation and development would be stifled if fundamental techniques were owned by any one company, leading to the blocking of new entrants and economic concentration.

9.2.2 Discussion of Views

Again strongly opposing views were received on this issue. Many submissions argued that business system patents encourage innovation and the dissemination of knowledge in the same manner as patents in other technologies²⁸. The point was made that no concrete evidence of business system patents having overall negative effects has emerged, including in the US where a large number of such patents has been granted for several years now, particularly in e-commerce technologies²⁹. The effect of patenting business systems which subsequently become fundamental industry standards was considered to be no different to other technologies. Patenting of business systems was said to assist the dissemination of knowledge due to such innovations typically not being published in other ways³⁰.

²⁸ Lee Pippard, Craig Auwardt, Bill Duncan, Australian Federation of Intellectual Property Attorneys, Griffith Hack, John Swinson, Law Council of Australia, Davies Collison Cave, American Intellectual Property Law Association, Australian Computer Society, Institute of Patent and Trade Mark Attorneys of Australia.

²⁹ Australian Information Industry Association, Australian Federation of Intellectual Property Attorneys, Griffith Hack, John Swinson, Law Council of Australia, Davies Collison Cave.

³⁰ Craig Auwardt, Australian Federation of Intellectual Property Attorneys, Davies Collison Cave, American Intellectual Property Law Association.

Some submissions shared the conclusion of the UKPO review that business systems appear to be fundamentally unsuitable for patent protection³¹. It was said that although there may be insufficient evidence of business systems having harmful effects, monopolies should only be imposed where the benefits are clear, and there was insufficient evidence of business system patents helping to increase innovation. There was no lack of innovation in computer implemented business systems in the US before they were officially found patentable in the *State Street* decision in 1998. It was argued that patents evolved in manufacturing industries in order to provide incentive for innovation which would otherwise not occur due to the risk of rivals easily copying inventions which are expensive to initially develop. Most business systems do not involve costly research and development, and so the advantage of being first in the market is enough incentive for development in this field. Business system patents will increase the 'weaponisation' of patents, in which they are primarily used for bargaining, insurance and squatting purposes³². Such views involve the idea of copying, competition, flexibility and incremental advances actually being desirable in the business world, not detrimental.

Other views expressed included concerns over the patent system in general. There was considered to be no conclusive evidence that patents in any field encourage innovation³³, and that the patent system is a pre-information age system which presumes the dissemination of knowledge amongst isolated inventors is difficult to achieve³⁴. There is also the belief that the lead times and monopoly periods of the patent system do not suit the shorter life cycles of many current products.

³¹ Australian Consumers' Association, Patrick Caldon, Brendan Scott, Australian Centre for Intellectual Property in Agriculture.

³² Australian Consumers' Association.

³³ Australian Consumers' Association, John Swinson

³⁴ Brendan Scott.

9.3 Australian laws and practices

9.3.1 Background

In most countries, patentability is dependent on the technical implementation of the invention, the main exception being the United States. However some experts query whether the requirement of ‘implementation’ or ‘industrial/technical application’ amounts to a distinction of any real significance. This is particularly true in the case of e-commerce business systems, where computer implementation is now ubiquitous.

Under current Australian law, business systems are patentable as long as they satisfy the *National Research and Development Corporation* criteria of 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”, and are not considered to be mere schemes or plans. While this test has the advantage of flexibility, courts have tended to interpret it so broadly that it has been argued by some that practically any subject matter is inherently patentable. Some have also argued that the NRDC requirement that the artificially created state of affairs be observable has been forgotten, particularly in light of the doubts raised about this requirement in *Welcome Real-Time SA v. Catuity Inc.*

It is uncertain whether Australia currently goes beyond its TRIPS obligations by granting patents for inventions that are not in a ‘field of technology’, as this concept may have quite different interpretations. It is no longer IP Australia’s practice to require an invention to be technically implemented in some way in order to be patentable, as there is no explicit requirement for this in Australian law.

The changes to Australian patent legislation introduced in response to the Ergas report are expected to aid examiners in assessing business system patents. There are, however, still questions as to whether the inventive step standard should be raised further so as to reduce what is seen to be an increasing number of trivial patents. Commentators speak of a ‘patent thicket’ of overlapping rights which requires those seeking to commercialise new technology to find and obtain licences from multiple patentees. It is a long standing principle of patent law that no more than a ‘scintilla’ of invention is necessary to satisfy the requirement of inventive step³⁵. It is questioned whether a scintilla of inventiveness is enough to warrant a 20 year term.

Some have argued that because the internet and e-commerce industries are such rapidly changing areas, much reduced patent terms for business method patents would help diminish any anti-competitive effect and more closely reflect the speed with which such inventions are developed. The opposing view is that not all business innovations deserve lesser protection, and that it would result in artificial distinctions between technologies and produce a chilling effect on venture capital for the industry. In the Ergas report, the Committee did not consider that the term of protection required change. Only if an invention is not considered to be within a ‘field of technology’ within the meaning of Article 27 of TRIPS will the invention not be subject to the twenty year term set by TRIPS and thus be potentially subject to a shorter time period.

³⁵ *Samuel Parkes & Co Ltd. vs Crocker Bros. Ltd.* (1929) 46 RPC 241.

Another issue is the time taken for a standard patent to be granted. On average it takes 3 to 3.5 years from filing for an Australian patent application to be granted. This period is generally shorter than that of other IP offices. Applications are typically examined about 2 years after being filed, and if objections to patentability are raised by the examiner the applicant is given up to a further 21 months in which to address them, although late response fees are due after 12 months. These fees were increased by over 50% in 2002.

Australian applicants have significant power to speed up the process, but are allowed this time to determine the viability of their invention, to coordinate prosecution of the Australian application with overseas applications, and to reduce up-front financial burdens. Some view this period to be inappropriate for quickly evolving industries with short product life spans, particularly for potential infringers needing to know whether a competitor's invention is patentable. The more quickly granted Innovation Patent, with a maximum term of 8 years, is possibly more suited for this area. Others believe the short life cycles of e-commerce type products to be a myth, and the patenting of short lived products may not be of benefit to society in any case.

By comparison, in the US applicants have six months after an application has been first examined in which to overcome any objections to patentability, with some extensions to this allowed. This system is being modified under *The 21st Century Strategic Plan* to significantly improve timeliness and to allow applicants greater choice in the timing of examination. In the UK, applicants have 12 months from an examiner's first report in which to overcome any objections, or 4.5 years from the priority date, whichever is later.

Patent offices around the world have experienced difficulties in examining and granting business system patents. The common complaints are that granted patents have been too broad in their scope, or are for mere automations of established practices. It has been claimed the problems have been due to two main factors:

- patent examiners lacking relevant experience and knowledge in the areas of business, finance, marketing and commerce; and/or
- absence of published prior art. Until recently there has been very little business system material for patent offices to search and base their assessments on, particularly in patent literature.

9.3.2 Discussion of Views

Harmonisation of Australian patent law

The majority of submissions received expressed the view that current Australian patent laws in relation to business systems are appropriate and do not require change³⁶. This view clearly favours maintaining the harmony that Australian law currently has with US law. The *NRDC* test for patentability in Australia is believed flexible enough to accommodate new technologies, yet ensures that only innovations in economic fields are patentable. It was very strongly felt that there is no basis for treating business systems differently to other technologies, and that the introduction of a requirement for some sort of technical aspect or implementation in order to be patentable is unnecessary. Both of these changes would require the use of definitions and/or exclusions, and the European

³⁶ Lee Pippard, Spruson and Ferguson, Australian Information Industry Association, Craig Auwardt, Bill Duncan, Australian Federation of Intellectual Property Attorneys, Griffith Hack, John Swinson, Law Council of Australia, Davies Collison Cave, American Intellectual Property Law Association, Australian Computer Society, Institute of Patent and Trade Mark Attorneys of Australia.

experience showed this to be complex, inefficient, and ultimately ineffectual as applicants developed tactics for working around them.

An opposing view was that the flexibility of current Australian patent law meant the requirements for patentability were overly broad, complex and uncertain³⁷. According to this view, monopolies should only be granted in circumstances where the benefits are clear, and not everything commercially oriented is deserving of patent protection. This argument followed the European approach of innovations needing to be a technology, not merely use technology, in order to be patentable. It was felt that some form of technical requirement is needed, however the uncertainty of the European system should be avoided. It was suggested that the TRIPS wording “in a field of technology” be included in Australian legislation.

Inventive Step

Some submissions expressed the view that the Australian test for inventive step is too complex for the patent office to be able to properly assess given the necessarily limited resources available³⁸. Only the courts have any chance of dealing with this issue thoroughly.

Patenting of Fundamental Processes

Another point raised was that the Australian patent system had no exemptions for fair use, research or independent creation, and therefore few safety valves constrain the rights of patent holders relative to other IP rights models³⁹. It was suggested that there needed to be increased use of compulsory licence laws to ensure further development of patented concepts in all fields.

Quality of Business Systems Patents

A common opinion expressed was that while there are still problems with the quality of granted business system patents, these can be addressed through improving IP Australia practices and interaction with industry⁴⁰. It is considered that the April 2002 changes to Australian law to increase the presumption of validity of granted patents will help increase the rigour of examination of patents, although it is still too early for any evidence of this to have emerged. Suggested further improvements include upgrading search and examination processes, introducing more levels of review and opportunity for public comment, and increased use of non-patent literature through collaboration with other IP offices on suitable prior art databases.

Expertise in IP Australia

Some thought it unreasonable to expect IP Australia to have the expertise and resources necessary to manage this new field in the short term, and so more use should be made of experts in the field who have superior experience and knowledge⁴¹. The possibility was raised of IP Australia providing information on new business system patent applications and grants to interested groups in a regular, easy to use format. This would provide the opportunity for industry experts to provide additional prior art information to IP Australia on particular cases. Related to this was the suggestion of requiring the applicant to

³⁷ Australian Consumers' Association, Patrick Caldon, Brendan Scott.

³⁸ John Swinson, Australian Venture Capital Association.

³⁹ Australian Centre for Intellectual Property in Agriculture.

⁴⁰ Spruson and Ferguson, Australian Information Industry Association, Bill Duncan, Australian Federation of Intellectual Property Attorneys, Griffith Hack, John Swinson, Davies Collison Cave, International Association for the Protection of Industrial Property, Australian Computer Society, Institute of Patent and Trade Mark Attorneys of Australia.

⁴¹ Law Council of Australia, Davies Collison Cave, Australian Computer Society.

provide a development history of the art as part of the application or specification, in order to further assist patent examiners.

Lead Times

The need for shorter lead times and quicker assessment of all Australian patents was raised⁴². This was thought necessary in order to achieve greater certainty for third parties and to avoid adverse effects on business. It was recognised that these delays were often due to applicants choosing to extend assessment periods, but that the needs of competitors and the general public should not be overridden.

⁴² Australian Consumers' Association, Australian Information Industry Association, Australian Computer Society.

9.4 Public awareness and IP capabilities

9.4.1 Background

Literature suggests that patent strategies are relatively underdeveloped in industries based on software and e-commerce, with a large proportion unaware of the patentability of such innovations. The rise in business method patents has the potential to cause major problems for businesses such as small to medium enterprises with little experience in patents and with few resources available for monitoring possible infringements or handling litigation. It is questionable whether a user friendly and practical system exists for potential applicants and infringers to check whether business system concepts are novel or already patented. In June 2003 the WIPO International Patent Classification (IPC) Working Group agreed to create a new class for business system inventions for the next edition of the IPC.

Many business methods operate on the internet, giving rise to jurisdiction issues. Whether a web site involving a patented feature or process is infringing a patent in a particular country may depend on the level of commercial activity involved, and raises questions such as where did the infringement occur, where is the appropriate place to sue and which court has jurisdiction?

Another issue involves the public confidence in the patent system. The granting of invalid patents or poor understanding of the system has the potential to undermine the integrity of the patent system and devalue all types of patents. This relates to the growing importance of IP portfolios in attracting investment.

A key issue is whether there is sufficient guidance and information about the patent system with regard to business systems. This relates to customers wishing to protect their own intellectual property and to those seeking to avoid infringing the business system patents of others.

9.4.2 Discussion of Views

Education in IP

Many of the submissions received by ACIP held the view that Australian businesses needed to be better educated about IP in general, as well as business systems in particular, and that IP Australia should take a more active role in this area⁴³. Recent concerns over the patenting of controversial subjects, although largely unwarranted, have at least encouraged more businesses to become more familiar with this area of IP.

An opposing view was that such education should not be necessary for business systems⁴⁴. It would be costly and inefficient for Australian enterprises to reduce their focus on their core business and have to become more skilled in IP matters in order to manage their daily operations.

⁴³ Australian Information Industry Association, Bill Duncan, Australian Federation of Intellectual Property Attorneys, Griffith Hack, American Intellectual Property Law Association.

⁴⁴ Australian Consumers' Association.

Prior Art and Infringement Searches

A common opinion was that SMEs don't have the resources to conduct meaningful prior art or infringement searches, resulting in many simply deciding to pursue business initiatives regardless of the IP risks⁴⁵. Such customers of IP Australia require better search tools to check for novelty and possible infringement. Examples of possible tools to aid in searching include the full text of Australian patent specifications being available for searching online, and in relation to business systems in particular the employment of a more useful classification system than the current IPC.

Also raised was the possibility of IP Australia providing information on new business system patent applications and grants to interested groups in a regular, easy to use format. As well as providing the opportunity for industry experts to provide additional prior art information to IP Australia on particular cases, this would greatly assist the business community in maintaining awareness of the IP landscape.

Jurisdiction

Jurisdiction was considered in some submissions to be a major issue that affected many areas besides business system patents⁴⁶. Complexities arise where only part of an invention is being performed within a jurisdiction, yet it is contributing to performing the complete invention. Clever claim construction can partly address this, however it was put forward that there may be a need for changes to Australian unity of invention and infringement laws to further capture such infringement in Australia.

⁴⁵ Australian Consumers' Association, Australian Information Industry Association, Brendan Scott, , Australian Federation of Intellectual Property Attorneys, Griffith Hack, Davies Collison Cave, Australian Computer Society, Institute of Patent and Trade Mark Attorneys.

⁴⁶ Australian Consumers' Association, Australian Federation of Intellectual Property Attorneys, Griffith Hack, John Swinson, Australian Computer Society, Institute of Patent and Trade Mark Attorneys.

10 Considerations

10.1 Subject Matter Appropriate for Patents

ACIP considers that the first and most important issue is whether it is in Australia's national interest to grant patents for business systems. Australia's international obligations serve as the starting point for this assessment. ACIP recognises that there are advantages for Australian law to be in harmony with the major industrialised countries, however the differing approaches on this issue between the US and the European Union means there is no clear guidance for Australia. Australian patent law is currently similar to US law in that business systems are patentable and there is no specific requirement for technical contribution.

The TRIPS agreement mandates patent protection 'in all fields of technology'. Thus, Australia is obliged to provide patent protection for all inventions that are in a field of technology. It is not within the brief of this review to question Australia's obligations under TRIPS, and in any case this would not be warranted by the magnitude of the issue of business system patents in Australia. While some business system inventions will be considered to be in a field of technology, others may be more doubtful. There is no obligation under TRIPS to provide patent protection for business system inventions that are not in a field of technology. Australia is, however, authorised under Article 1 of TRIPS to choose to grant rights beyond the minimum standards. It can be argued that as a net importer of technology this would generally not be in Australia's interests. The crux of the issue facing this review is whether it is in Australia's best interests to grant exclusive rights for business systems beyond the minimum TRIPS requirements.

Patents grant statutory monopolies of a limited period of time for inventions that fulfil certain requirements. However, a necessary consequence of a monopoly is the creation of barriers to entry into the market and a stifling of competition. This is justified by the need to promote innovation and disclose innovations to the public. As the court stated in *Welcome Real Time*⁴⁷, the law must strike a balance between encouragement of innovation by the grant of a monopoly on the one hand, and freedom of competition on the other. The exclusive rights provided by patents are an exception to the rule of free competition. It could be argued that unless there is evidence demonstrating a need to spur innovation in a particular field (and absent any international obligation), the default position of free competition and no patenting should be maintained. This would ensure that exclusive rights are only granted with good reason, and enable the patent system to evolve to meet the challenges posed by new areas of innovation.

Previous decisions on the patentability of other controversial areas, such as software, genes, bioinformatics and the treatment of humans, have not been based on assessments of whether patent protection is necessary in order to encourage innovation in those particular fields. To require such assessments for all inventions which are not in a field of technology would result in Australian law having different criteria of patentability for different areas of innovation. This appears to be undesirable, yet would simply be a consequence of Australia having both national objectives and international constraints.

⁴⁷ n. 8 at 29.

Although the submissions to the review provided some evidence that increased intellectual property rights in the form of patents are needed to stimulate greater investment in research, development and commercialisation of business systems, this was by no means conclusive. There is also a lack of evidence demonstrating either that business systems are an unsuitable area for patenting, or that allowing the patenting of business systems would stifle competition in new areas of commercial activity. Due to this lack of clear evidence ACIP is unable to find that business system patents would have either an overall positive or negative influence on research and development.

Some commentators believe that in such circumstances Australia should err towards granting patent protection. However, if free competition is taken to be the default position, the absence of conclusive economic evidence or an obligation under TRIPS means that business system inventions that are not within a 'field of technology' should not be patented.

ACIP considers that there are several different ways in which business systems that are not in a field of technology could be excluded from patentability in Australia. One way would be to introduce as a criterion of patentability a requirement that an invention have a 'technical effect'. This would bring Australian law closer to the law in the EPO, but move it away from the law in Japan and the US. It appears that many business system inventions for which patent applications are filed in Australia have a technical effect, often in order to be consistent with corresponding European applications. Another way would be to introduce as a criterion of patentability a requirement that an invention be in a 'field of technology'. This would make Australian patent law coterminous with TRIPS. Alternatively, the legislature could introduce a specific exclusion for business systems that are not within a 'field of technology'.

The addition of a technical effect or field of technology requirement may involve broad changes to Australia's existing patent law, which was developed before TRIPS became the international norm in 1995. The implications of such changes would largely depend on how concepts like 'in a field of technology' or 'technical effect' would be interpreted by Australian courts. A general concern would be that such changes could foreclose the possibility of patenting new areas of invention. New areas of innovation which are not in a field of technology or lack a technical effect, yet are worthy of patent protection, would not be patentable until clear economic evidence is available and legislation is suitably amended. It is also possible that these changes could affect the existing body of Australian patent law - areas which were previously patentable may cease to be so. Another more specific concern relating to these changes is that they may not be very effective because the applicant will no doubt seek to work around the legislative provisions by clever methods of claim drafting. The introduction of a specific exclusion on business system patents would have a lesser impact on Australian patent law, as it would be confined to that particular subject matter. However, this would also be subject to interpretation of a term such as 'business system', and the European experience is that specific legislative exclusions are even more susceptible to being navigated around.

ACIP notes that significant changes to Australia patent law can involve high transaction costs and can create high levels of uncertainty. ACIP also has concerns that changes which significantly alter the test for patentability may have unintended and undesirable consequences. In addition, changes of this nature would in essence run counter to the accepted Ergas position that Australia has, on the whole, benefited from the adaptiveness and flexibility of the current tests for patentability. Given that there are potential costs in making changes to the current system, and that such changes have no real surety of

outcome, ACIP believes that, on balance, the prudent approach is to maintain the status quo and to not recommend a change of this nature.

Although controversy was generated worldwide on this issue, this was not reflected to the same extent in the submissions to the review. The ACIP Issues Paper was sent to over 130 business organisations, interest groups and individuals. ACIP received 19 submissions in response, most of these from patent attorneys and legal organisations, and only a few of the submissions had strong objections to the patenting of business systems. This indicates that the issue is not one of great concern in the general business community at this time. ACIP believes that a great deal of the controversy surrounding business system patents has either been based on speculation, or has been concerned with the issues of novelty and inventive step, rather than the suitability of the subject matter and the encouragement of innovation. Such issues can be addressed without making business systems unpatentable.

A major fear is that business system patents will become pervasive in the business landscape, creating inefficiencies and dampening effects without a corresponding increase in innovation. No examples of Australian enterprises being unfairly hindered by business system patents have been provided to the review. ACIP has been given the clear impression that many Australian businesses consider business system patents of great benefit to them, if not crucial for some initiatives. Some specific examples were provided of this, suggesting that business system patents can have a significant impact on free competition. Yet the overall number of business system patents granted in Australia is still relatively very small, with only about 60 being granted per year for the last three years. If the requirements to be ‘in a field of technology’ or have a ‘technical effect’ were introduced as criteria of patentability, many of these patents may satisfy these requirements. This could result in very few business system patents being affected by such changes, while the impact on other areas of innovation could be significant.

The latest US and Japanese figures suggest that a short term wave in business system patents has already peaked and is now beginning to fall. The very nature of business systems means they have the potential to have an impact beyond their number, and to further increase in number as this area of IP expands in Australia. However, there is no clear indication that this will indeed eventuate. Also, nearly 40% of business system patents are granted to Australian applicants, considerably higher than the 10% average for all technologies. This counters the argument that as a net importer of technology it is not in Australia’s interests to grant business system patent rights beyond those required under TRIPS. In short, business system patents do not appear to be of major economic significance in Australia at this time, and so the exceptional circumstances required to justify a potentially fundamental change to the Australian patent system do not appear to exist.

Therefore, although there is a strong argument for business systems not ‘in a field of technology’ to only be patented when there is clear evidence that this would encourage innovation, the transaction costs of this may far outweigh any benefits. Although such a principle may be appropriate for devising an entirely new framework, and may be worthy of further consideration by ACIP, incorporating it into Australia’s current system would be complex, and would run a reasonable risk of unanticipated consequences. This is due to the high level of uncertainty over the best method of implementation, the level of change to Australian patent law, and the effect on new and existing technologies. On balance, any adverse impact from a small number of patents for business systems which are not clearly in a field of technology is not sufficient to justify the costs and level of

uncertainty involved in removing their patentability. ACIP considers that the current tests of patentability serve Australia's needs at this time, and therefore recommends no changes be made.

Recommendation 1

No changes should be made to Australian legislation regarding the issue of patentable subject matter.

However, the potential exists for business system patents that are not in a field of technology to become of such economic significance as to warrant further analysis. This could be manifested by a substantial increase in the number of patents being granted in this area, or individual patents being shown to have major negative effects on business. Monitoring of the situation is required, with consideration being given to the volume of Australian applications and grants, opposition and court actions, impact on business, community concern, legislative changes and foreign developments in these areas. A brief annual report should be made to ACIP for the next 5 years to enable the assessment of whether further action is warranted.

Recommendation 2

IP Australia should monitor the number and significance of business system patents in Australia and make a brief annual report to ACIP for the next 5 years, or until ACIP considers this no longer necessary. ACIP should use this information to assess whether circumstances have arisen which necessitate further action on this issue.

10.2 Quality of Patents Granted by IP Australia

ACIP believes that much of the controversy surrounding business system patents has been a consequence of the relative inexperience of IP Offices in this new field of patenting. IP Australia's experience in business system patents has developed and will continue to do so, but further measures for ensuring the validity of granted patents should be investigated.

ACIP recognises that coverage of business systems in patent literature databases has improved greatly in recent years, however further use of non-patent literature during the examination process is encouraged, including investigating more cooperation with other IP offices and local industry. This may involve leveraging off the existing benchmarking process between Australia, the United Kingdom and the United States, and the Trilateral Offices' previous work on identifying suitable sources of non-patent literature. Consideration should be given to adopting a process similar to that of the USPTO in seeking guidance from private industry on such sources.

Recommendation 3

ACIP encourages IP Australia to make further use of non-patent literature during the examination process, including investigating more cooperation with other IP offices and local industry.

IP Australia should also further enhance the skills of patent examiners who assess business system applications. Most examiners in the business systems area are primarily from science and engineering backgrounds, and gain most of their knowledge of business systems through their own research and prior art searches. ACIP recognises the difficulties in attracting people skilled in areas such as electronic commerce or organisational management, and agrees with the approach of providing regular, targeted training for examiners in such areas. Examples could include industry placements and seminars tailored to the needs of examiners.

Recommendation 4

IP Australia should further enhance business training for patent examiners who assess business system applications.

The suggestion that IP Australia introduce an extra level of review for all business system patent applications, such as that operated by the USPTO, does not appear warranted. Such a measure would increase the processing costs for these patents considerably, and this does not appear reasonable in light of the level of concern and the significance of business systems at this stage.

One suggestion made to the review was that information on the latest business system applications and grants be provided to interested groups so they can aid in the location of the best prior art. This has merit, however the resources required in packaging the information and targeting interest groups would be significant. An alternative has been proposed below in connection with raising general public awareness and involvement in IP.

Another proposal was the introduction of legislative changes that require all patent applications to include some discussion of the most relevant prior art. This was intended to aid patent examiners in understanding this relatively new field to a degree not possible by the mere identification of relevant documents. ACIP considers this would be a significant change to Australian patent law, as it would affect all technologies, and run the risk of being a token requirement. ACIP considers such a change is not warranted in light of the Intellectual Property Laws Amendment Bill 2002 which requires applicants to provide all search results supplied by a foreign IP Office.

10.3 Public Awareness of IP

The call for better education and awareness of IP issues in the Australian business community is a recurring one. IP Australia has successfully increased its activity in this area in recent years, and ACIP urges this to continue. Businesses do run the risk of inadvertently infringing business system patents simply due to ignorance of this area of IP, and they should be given the knowledge to assess the situation for themselves. This can be achieved through both specific education campaigns and general discussion of IP issues in the media. The risk of incorrect information being propagated through the media is more than offset by people becoming aware enough to seek further advice. ACIP also believes that there is potentially great benefit in raising public awareness of applicants' ability to submit relevant citations under Sections 27 and 28 of the *Patents Act 1990* for specific patent applications. More active involvement by the general public and industry experts in this manner can assist patent examiners in locating the best prior art - a task acknowledged as particularly difficult in this field. Increasing awareness of Opposition and Re-examination proceedings is not thought to be of particular benefit.

Recommendation 5

IP Australia should investigate conducting an education program for SMEs on the IP issues of business systems and electronic commerce in collaboration with the National Office for the Information Economy (NOIE).

Recommendation 6

IP Australia and the IP profession should actively encourage debate on controversial IP issues in the media.

Recommendation 7

IP Australia should, through its publications and website, raise public awareness of the ability to submit relevant citations under Sections 27 and 28 of the *Patents Act 1990* for specific patent applications.

10.4 Prior Art and Infringement searches

A fundamental aim of the patent system is to encourage the dissemination of knowledge. Part of the bargain in receiving a monopoly for an invention is to provide full details of the advance for the benefit of society, and it is the government's responsibility to make this information widely available. For the patent system to operate effectively it is also necessary for sufficient details of applications and granted monopolies to be readily available so that potential applicants and infringers can make informed assessments of the IP landscape.

IP Australia uses current information technology to provide a useful information service to customers and the general public, yet it has been made clear by submissions to this inquiry that current search tools are inadequate for managing areas such as business system patents. The ability to conduct keyword searches of patent abstracts (and preferably full specifications) is clearly of great benefit in this area of innovation. Search facilities of this type have been available in the US for several years, and should be introduced in Australia as soon as possible.

Recommendation 8

ACIP encourages IP Australia to make the abstracts of all Australian patent applications and grants searchable by text and International Patent Classification on the IP Australia website as soon as is possible, beginning with business systems. Preferably this would extend to full text searching of the complete specifications at a later stage.

ACIP also believes that, because business systems have the potential to impact on enterprises with little experience or knowledge of the IP system, it is important that information on such patents be easily accessible. IP Australia should provide on its website an easy to use method of checking all new patent applications and grants in the International Patent Classification (IPC) business system class G06F 17/60, and the equivalent class in the next edition of the IPC. This would allow the general public to more easily monitor new and potential business systems by regularly visiting the site.

Recommendation 9

IP Australia should provide on its website search engines an easy to follow process for checking all new patent applications and grants in the International Patent Classification business system class G06F 17/60, and the equivalent class in future editions of the IPC.

ACIP notes that the next edition of the IPC is expected to be improved by having the business system class divided into more useful subgroups. However, the European Classification system (ECLA) as used by the European Patent Office divides the main IPC business systems class G06F 17/60 used by IP Australia into a larger number of

more specific and therefore more useful areas. Classes from other sections such as G06F 1/00 also contain divisions that could be used in the business systems area. Although the USPTO classification system is very different to the IPC, it may provide some guidance as it also contains a large number of more specific divisions within the business systems area of Class 705. More detail on these systems is provided in Appendix 3. There are approximately 1300 Australian 'active' applications or granted patents currently indexed in the business system class of G06F 17/60, and thousands more Patent Cooperation Treaty applications with the potential to become active, and therefore be of interest⁴⁸. Operating a more detailed version of the IPC for business systems in Australia would greatly assist customers in identifying relevant documents in this increasingly crowded class. This may involve the back-capture of previously granted patents into the new classes, although extra resources would be required. ACIP recognises that providing such a system may instigate calls for similar measures in other technologies, and must not lead to an abandonment of the current IPC review process.

Recommendation 10

IP Australia should investigate an improved local classification system for business systems, with particular regard given to the European Patent Office's European Classification.

ACIP considers the issues of jurisdiction and contributory infringement to be important. Experience in the UK indicates that, with the judiciary taking a positive approach to questions of interpretation and infringement, a patentee can obtain relief even when part of the infringing act occurs in another jurisdiction. There is no clear indication yet of what legislative changes, if any, might be necessary in Australia, and this is beyond the brief of this review. Australian businesses obviously need to be aware of the need to protect themselves against contributory infringement, and the potential for infringing in other jurisdictions. This issue is part of the more general education of Australian business on general IP matters.

10.5 Lead Times

The impact of lead times and assessment periods on the certainty of IP rights is an important issue. ACIP recognises that it is critical that applicants are given ample time at this stage of the innovation process. However, long delays can have a dampening effect on competitors, as they do not know whether they are free to pursue a particular course of action. This, of course, flows through to costs to the general public. It is important not to focus too narrowly on the needs of fee paying applicants at the expense of those who incur less obvious costs.

Possible solutions include significantly increasing the cost to applicants of responding after a certain period, placing a cap on the extension of assessment periods, and enabling interested parties to request the allowed period be reduced. Such options would affect

⁴⁸ IP Australia, Strategy and Projects, September 2003

applications in all technologies, with the last two involving significant changes to long established practice. In 2002 IP Australia increased the fees due on applicant responses received more than 12 months after an examiner's first report. ACIP recommends that when next reviewing its fees and charges IP Australia should assess whether this increase had any effect on response times, and should consider increasing response fees further. This would encourage quicker processing and greater certainty for competitors and the general community.

Recommendation 11

When next reviewing its fees and charges IP Australia should consider further increasing response fees due on applicant responses received more than 12 months after an examiner's first report.

APPENDIX 1: SUBMISSIONS RECEIVED BY ACIP

1. Lee Pippard
2. Australian Consumers' Association
3. Spruson and Ferguson
4. Patrick Caldon
5. Australian Information Industry Association (AIIA)
6. Brendan Scott
7. Miles Walden
8. Craig Auwardt
9. Bill Duncan
10. Australian Federation of Intellectual Property Attorneys (FICPI)
11. Griffith Hack
12. John Swinson
13. Law Council of Australia - Intellectual Property Committee
14. Davies Collison Cave
15. Australian Centre for Intellectual Property in Agriculture (ACIPA)
16. International Association for the Protection of Industrial Property (AIPPI)
17. American Intellectual Property Law Association (AIPLA)
18. Australian Computer Society (ACS)
19. Institute of Patent and Trade Mark Attorneys of Australia (IPTA)

APPENDIX 2: CONSULTATION PARTICIPANTS

Canberra

Bridget Larsen	Australian Information Industry Association
Tim Staley	Griffith Hack

Melbourne

Bill Duncan	Fast 101 Pty Ltd
Michael Dowling	Law Council of Australia
Wayne McMaster	Law Council of Australia
Noel Brett	Australian Federation of Intellectual Property Attorneys
Peter Huntsman	Australian Federation of Intellectual Property Attorneys

Sydney

Philip Argy	Australian Computer Society
Charles Britton	Australian Consumers' Association
Paul Savage	Australian Venture Capital Association
John Swinson	Mallesons Stephen Jaques
Kim O'Connell	Mallesons Stephen Jaques
Leon Allen	Institute of Patent and Trade Mark Attorneys of Australia
Chris O'Sullivan	Institute of Patent and Trade Mark Attorneys of Australia
Miles Walden	CIAM Solutions

APPENDIX 3: Classification of Business System Patents

International Patent Classification (IPC)

The majority of business systems are indexed in *G06F 17/60*, however not all inventions in this class would be considered business systems. Business systems are occasionally indexed in other areas of the IPC, with the main alternative being *G06F 19/00*. Under the IPC *G06F 1/00* not used for business systems, as it is restricted to subjects such as digital function generators, clock signals, power supplies and cooling arrangements.

Section G - Physics

G06F - Electric Digital Data Processing

17/00	Digital computing or data processing equipment or methods, specially adapted for specific functions.
17/10 - 17/18	Complex mathematical operations.
17/20 - 17/28	Handling natural language data.
17/30	Information retrieval; Database structures therefor.
17/40	Data acquisition and logging.
17/50	Computer-aided design.
17/60	Administrative, commercial, managerial, supervisory or forecasting purposes.
19/00	Digital computing or data processing equipment or methods, specially adapted for specific applications (17/00 takes precedence)

In groups 17/00 to 19/00, it is desirable to add the indexing codes of groups 151:00 to 171:00. However, a significant number of IP offices do not use them.

151:00	For invoicing.
153:00	For inventory purposes; For order filling.
153:02	For seat reservation.
155:00	For betting on the outcome of an event, eg. a race, an election; For totalisation.
157:00	For bank or analogous accounting; For calculating earned income.
159:00	For medical or biological purposes.
161:00	For game playing.
163:00	For traffic control.
165:00	For guiding a vehicle, missile or the like along a course, eg. carried on vehicle
167:00	For nuclear physics or engineering, e.g. radiation-hardened.
169:00	For meteorology.
171:00	For gun laying; For bomb aiming.

Proposed Changes to the IPC

In June 2003 the IPC Revision Group of the WIPO IPC Union agreed to create a new subclass G06Q and a number of main groups of that subclass. A newly created definition project is to clarify the scope of the subclass, including whether non-technical inventions relating to business systems should be classified in the new area. The next edition of the IPC is expected to be valid from January 2005.

Section G - Physics

G06F - Electric Digital Data Processing

17/00	Digital computing or data processing equipment or methods, specially adapted for specific functions.
17/10 - 17/18	Complex mathematical operations.
17/20 - 17/28	Handling natural language data.
17/30	Information retrieval; Database structures therefor.
17/40	Data acquisition and logging.
17/50	Computer-aided design.
17/60	<i>(transferred to G06Q)</i>
19/00	Digital computing or data processing equipment or methods, specially adapted for specific applications (17/00 takes precedence)

G06Q - Data Processing Equipment or Methods, specially adapted for administrative, commercial, financial, managerial, supervisory or forecasting purposes

2/00	Administration, Management
4/00	Payment Methods
6/00	Electronic Commerce
8/00	Finance, Insurance

European Classification (ECLA)

ECLA is essentially a more detailed and adaptive version of the IPC. In ECLA business systems are primarily indexed in the G06F 17/60 and 19/00 classes, although some business systems may also be indexed in the areas of G06F 1/00 and 17/30W.

Section G - Physics

G06F - Electric Digital Data Processing

1/00	Details of data-processing equipment not covered by groups G06F 3/00 to G06F 13/00.
1/00N	Protection against unauthorised activity relating to computers and software.
1/00N1 - 1/00N1V2	by protecting specific devices.
1/00N5 - 1/00N5P	by safeguarding a module, system or network.
1/00N7 - 1/00N7R2	by manipulation of programmes or processes.
1/00N9	by direct protection of data.
1/00R	Computer virus detection or handling.
1/00R2	Virus type analysis.
1/00R4	Static detection.
1/00R6	Dynamic, i.e. run-time, detection.
1/00R8	Detection using dedicated hardware.
17/00	Digital computing or data processing equipment or methods, specially adapted for specific functions.
17/00D - 17/00D4M	for scientific or experimental signal analysis.
17/10 - 17/18	Complex mathematical operations.
17/20 - 17/28	Handling natural language data.
17/30	Information retrieval; Database structures therefor.
17/30A - 17/30A3V	Data indexing; Abstracting; Data reduction.
17/30B - 17/30B2	Interfaces; Database management systems; Updating.
17/30C	Concurrency control and recovery.
17/30D	Document retrieval systems.
17/30E	Information processing systems, e.g. multimedia systems.
17/30F	File systems; File servers.
17/30G - 17/30G4	Processing chained data, e.g. graphs, linked lists.
17/30H - 17/30H6	Query processing.
17/30N	using distributed data base systems, e.g. Networks.
17/30P - 17/30P2S9	Processing unordered data.
17/30R - 17/30R4	Processing relation structures information.
17/30T	Object oriented data structures. e.g. alpha-numerically ordered
17/30W	Retrieval from the Internet, e.g. browsers.
17/30W1	by querying, e.g. search engines or meta-search engines, crawling techniques, push systems.
17/30W1F	with filtering and personalisation.
17/30W1S	spatially dependent indexing and retrieval.
17/30W3	by navigation, e.g. using categorized browsing, portals, synchronized browsing, visual networks of

17/30W5	documents, virtual worlds or tours. by using information identifiers, e.g. encoding URL in specific indicia, browsing history.
17/30W7- 17/30W7S	Web site content organisation and management, e.g. publishing, automatic linking or maintaining pages.
17/30W9 - 17/30W9V	Browsing optimisation.
17/40	Data acquisition and logging.
17/50 - 17/50R	Computer-aided design.
17/60	Administrative, commercial, managerial, supervisory or forecasting purposes.
17/60A	of office automation, e.g. groupware, office work in progress.
17/60A2	for electronic mail.
17/60A4	for time management, e.g. calendars, reminders, scheduling meetings
17/60B	Data processing in buying-selling transactions.
17/60B2	Promotions; coupons, Services; Market research.
17/60B4	for exchange business, e.g. quotations or sales transactions of stock or other commodities.
17/60B6	Centrally controlled vending machines.
17/60B8	Billing or invoicing.
17/60C	Organising, forecasting or planning.
17/60C2	Resource allocation.
17/60C4	for inventory purposes, for order filling.
17/60C5	for storage, loading, unloading or distribution of goods or materials.
17/60C7	for reservation.
17/60C8 - 17/60C8D	for optimisation.
17/60D	Financial accounting; Calculating earned income, interest, insurance premiums, taxes.
17/60D2	Account balancing.
17/60D4	Risk analysis, e.g. for insurance, pensions.
17/60R	Betting on the outcome of an event, e.g. a race, an election; Totalisators.
17/60T	Spreadsheets.
19/00	Digital computing or data processing equipment or methods, specially adapted for specific applications. (17/00 takes precedence).
19/00A	for medical purposes; for biological purposes.
19/00A1	for data acquisition.
19/00A2	for medical diagnosis or biological tests.
19/00A2B	Biomedical image inspection.
19/00A3	Bioinformatics, i.e. computing methods for biological function
19/00A3D	prediction using sequence data. for drug targeting, i.e. Pharmacogenomics, lead

19/00A3G	discovery. for genome sequence analysis, e.g. homology detection, mutation detection, gene finding, chromosomal linkage analysis, DNA microarrays.
19/00A3P	for proteomics computing, e.g. DNA-to-protein translation, protein function and structure prediction.
19/00B	for game playing.

United States Class (USC)

Class 705 is the generic class for apparatus and methods for performing data processing operations uniquely designed for or utilised in the practice, administration, or management of an enterprise, or in the processing of financial data. This class also provides for apparatus and corresponding methods for performing data processing or calculating charges for goods or services.

Class 705 - Data processing: financial, business practice, management, or cost/price determination.

1	Automated electrical financial or business practice or management arrangement.
2	Health care management.
3	Patient record management.
4	Insurance.
5	Reservation, check-in, or booking display for reserved space.
6	Coordination of plural reservations.
7	Operations research.
8 - 9	Allocating resources or scheduling for an administrative function.
10	Market analysis, demand forecasting or surveying.
11	Job performance analysis.
12	Voting or election arrangement.
13	Transportation facility access.
14	Distribution or redemption of coupon, or incentive or promotion program.
15	Restaurant or bar.
16	Including point of sale terminal or electronic cash register.
17	Having interface for record bearing medium or carrier for electronic funds transfer or payment credit.
18	Having security or user identification provision.
19	Tax processing.
20	Price look-up processing.
21	Interconnection or interaction of plural electronic cash registers or to host computer.

22	Inventory monitoring.
23	Input by product or record sensing.
24	Specified transaction journal output feature.
25	Specified keyboard feature.
26	Electronic shopping.
27	Presentation of image or description of sales item.
28	Inventory management.
29	Itemization of parts, supplies, or services.
30	Accounting.
31	Tax preparation or submission.
32	Time accounting.
33	Checkbook balancing, updating or printing arrangement.
34	Bill preparation.
35	Finance.
36	Portfolio selection, planning or analysis.
37	Trading, matching, or bidding.
38	Credit (risk) processing or loan processing.
39 - 45	Including funds transfer or credit transaction.
50	Business processing using cryptography.
51	Usage protection of distributed data files.
52 - 54	Usage or charge determination.
55 - 56	Requiring a supplemental attachment or input to open.
57 - 58	Copy protection or prevention.
59	Licensing.
60	Postage metering system.
61	Reloading/recharging.
62	Having printing detail.
63	Utility metering system.
64	Secure transaction.
65 - 69	Including intelligent token.
70	Home banking.
71	Including key management.
72	Verifying PIN.
73	Terminal detail.
74	Anonymous user system.
75	Transaction verification.
76	Electronic credential.
77 - 79	Including remote charge determination or related payment system.
80	Electronic negotiation
400	For cost/price.
401	Postage meter system.
402	Special service or fee.
403	Recharging.
404	Record keeping.
405	Data protection.
406	With specific mail handling means.
407	Including mailed item weight.
408	Specific printing.
409	Rate updating.
410 - 411	Specialized function performed.
412	Utility usage.

413	Fluid
414	Weight.
415	Correcting or compensating.
416	Specific input and output device.
417	Distance.
418	Time
500	Miscellaneous.

Other US classes relevant to business systems include:

186	Merchandising. Includes various subclasses for customer service methods and apparatus in a variety of areas including banking, restaurant and stores.
463	Amusement devices; games. Includes subclasses for processing electronic data, including authorisation and credit/debit data.
902	Electronic Funds Transfer.

APPENDIX 4: DE Technologies Patent

In mid-2003 considerable controversy was generated in Australia by an e-commerce patent application by Canadian firm DE Technologies for a method of making an international purchase of a product using a computer system. The main patent claim involved the following steps:

- selecting a language and currency in which to view product descriptions and prices;
- selecting a product to purchase;
- retrieving price, code and shipping information about the selected product;
- calculating the total cost of purchasing the product and shipping it internationally;
- receiving the order and confirming payment, and
- accepting and invoicing the order.

The patent application has a priority date of December 1997, and was first published in Australia in March 1999. IP Australia examined the application and determined that the claims satisfied the criteria for patentability when compared with what was known at the priority date. The application was accepted in April 2003. During the subsequent three month opposition period no notices of opposition to the patent were filed, and so the application was scheduled for granting on 17 July 2003.

On 16 July 2003 IP Australia received a request for extension of time to file a notice of opposition. Granting of the patent was postponed to allow the request for an extension of time to be considered. The fee required for the request to be considered was not paid, and subsequently the patent was granted on 4 September 2003.

Similar patents were granted to DE Technologies in the US and New Zealand in late 2002. DE Technologies has initiated aggressive patent enforcement action against SMEs in New Zealand, in which it is offering licensing arrangements that include a sign on fee, royalties and a cost per transaction document generated. Concerns about the potential cost impost on businesses engaged in e-commerce generated public and media interest in New Zealand and Australia.

APPENDIX 5: Acronyms used in the Report

ACIP	Advisory Council on Intellectual Property
EC	European Commission
ECLA	European Classification
EPC	European Patent Convention
EPO	European Patent Office
IP	Intellectual Property
IPC	International Patent Classification
IPCRC	Intellectual Property and Competition Review Committee
IPRIA	Intellectual Property Research Institute of Australia
JPO	Japanese Patent Office
NOIE	National Office of the Information Economy
NPL	Non-Patent Literature
NRDC	<i>National Research and Development Corporation v. Commissioner of Patents</i> , (1959) 102 CLR 252, (1961) PRC 134, 1A IPR 63.
PCT	Patent Cooperation Treaty
SMEs	Small to Medium Enterprises
TRIPS	World Trade Organisation Agreement on Trade-Related Aspects of Intellectual Property
UKPO	United Kingdom Patent Office
USC	United States Classification
USPTO	United States Patent and Trademark Office
WIPO	World Intellectual Property Organisation