ADVISORY COUNCIL ON INTELLECTUAL PROPERTY

PATENTING OF BUSINESS SYSTEMS

ISSUES PAPER

July 2002

ISSUES PAPER

1 Executive Summary

The Advisory Council on Intellectual Property (ACIP) is an independent body established to provide advice to government and IP Australia* on policy and administrative issues associated with intellectual property.

It is generally acknowledged that an effective intellectual property system plays a central role in building a strong national innovation system which is a key component of Australia' economic development. This view supports the notion that IP promotes research and development by enabling Australian innovators to better capture returns from commercialising their ideas and products.

Over the last several years the number of patent applications and grants for business system patents has increased both in Australia and overseas. This increase has been driven by a range of factors including the rapid development of information technology and e-commerce, the growing dominance of service industries in the economy, and a 1998 decision of the US Court of Appeals for the Federal Circuit which found business systems patentable under US law.

The patentability of business systems currently varies between jurisdictions according to the manner in which they are claimed. The Australian patent system does not exclude the patenting of business system patents and a number of such patents have already been granted. However, some jurisdictions such as those administered under the European Patent Convention, exclude the grant of business system patents.

There is considerable debate as to the desirability of the business system or business method patents including whether they should be excluded from the patent system. Proponents of the business system patent argue that an exclusion is unjust and that business innovators merit reward for their labours no less great than that offered to other inventors.

Supporters of the exclusion claim that business system patents are too abstract to enable the law to limit the patent monopoly so as to properly balance rewards for innovation and the demands of free competition. They claim that the social costs of business system patents are higher than for other patents as they stifle competition by directly restraining conduct of competitors, they create barriers to entry and they may impose crippling multiple royalty fees on businesses. Furthermore, supporters of the exclusion argue that patents are unnecessary as incentives for the development of business systems. Proponents of the exclusion question whether overall social welfare would be increased by patenting of business systems and some suggest that such patents have inhibited innovation in certain fields, most notably, the software industry.

In response to the various concerns raised, the government has requested that ACIP examine the issues, and, within the constraints of Australia's international obligations, propose policy options that best meet Australia's national interest and the needs of

* IP Australia is the Commonwealth government body that registers patent, trade mark and design rights.

stakeholders. The purpose of this paper is to stimulate public debate on the issues, which have been grouped into four main areas:

- The economic and intellectual property significance of business systems
- Whether business system patents encourage innovation and the dissemination of knowledge
- The appropriateness of Australian patent laws and practices
- Public awareness and confidence in the patent system.

Once input from interested parties has been considered ACIP will prepare a report which they expect to submit to government in June 2003.

2 Overview

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 administrating the patent, trade mark and design right systems.

The rapid development of information technology and e-commerce has over the last several years helped drive an increase in the numbers of patent applications and grants for business systems, both in Australia and overseas. There has been a corresponding rise in concerns over the impact such patents have on business, innovation and the intellectual property system. In response to such concerns Parliamentary Secretary Entsch has requested 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.

The purpose of this paper is to stimulate public debate on the issues raised in this paper and any other relevant issues not identified in this paper. Accordingly ACIP has undertaken to circulate this Issues Paper and to consult with and seek input from interested parties. Once this input has been considered ACIP will prepare a report which they expect to submit to Parliamentary Secretary Entsch in June 2003.

ACIP would value comments on the issues raised and seeks expressions of interest from interested parties indicating whether they wish to take part in consultation sessions or intend providing written submissions (or both).

Written comments should be provided to the address below by **10 September 2002.**
It is expected that consultations will be held during **September- October 2002.**
It would be appreciated if you could advise your interest in taking part in consultations by contacting the ACIP Secretariat by **30 July 2002.**

Please address your advice, comments, written submissions and any queries to:

Ms Kay Collins
Secretary
ACIP
PO Box 200
WODEN ACT 2606

Telephone: (02) 6283 2402 email: kay.collins@ipaustralia.gov.au

Submissions may be made in electronic form or in hard copy. Unless marked confidential, all submissions will be made public and may be placed on the ACIP website at (**http://www.acip.gov.au**). The Committee's preference is for submissions to be made public; confidentiality should be reserved for material whose disclosure would be genuinely prejudicial to the party making the submission.

3 Introduction

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.

The rapid development of information technology has created new opportunities for innovation in the business world and led to an increase in the numbers of patents sought in this area. This has caused considerable controversy over several issues, such as whether business systems are indeed patentable, whether patent protection is appropriate for this area of innovation, and whether IP offices are granting valid business system patents. Concerns have been raised that business system patents do not satisfy the industrial applicability requirement for patentability, that they may discourage innovation and development in new industries, and that IP offices have been granting business system patents of dubious quality.

The 1998 decision of the US Court of Appeals for the Federal Circuit in *State Street Bank & trust Co. v Signature Financial Group, Inc.* (State Street) made it clear that methods of doing business are inherently patentable under US patent law. The numbers of patent applications filed for business systems further escalated following the State Street decision. The 2001 decision of the Federal Court of Australia in *Welcome Real-Time SA v. Catuity Inc* found the State Street decision to be persuasive and that business system patents in Australia should be subject to the same requirements as any other invention.

Under the Trade Related Aspects of Intellectual Property (TRIPS) agreement Australia is obliged to make patents available for inventions in all fields of technology, with some exclusions relating to humans, animals and plants. It is a matter of interpretation as to whether business systems are a field of technology. Australia is also subject to the move towards the harmonisation of international IP laws in order to reduce costs for applicants. Any direction Australia takes on this issue may need to be considered with regard to the practices of other nations.

Relevant Legislation

The Australian legislation relevant to this review is the *Patents Act 1990* and the regulations relevant to this.

4 Definition of Business Systems

4.1 Definition for the Purposes of the ACIP Working Party

The term "business system" (or business method or scheme) is a generic one and not precisely defined in any jurisdiction. It has been used to describe fields ranging from methods of exercising and sporting technique to managing financial transactions. A clear definition is required to clarify the scope of the ACIP working party. With the assistance of the Intellectual Property Research Institute of Australia (IPRIA) the following definition of a business system has been developed for the purposes of the ACIP working party:

A “business system” is:

(a) a scheme, plan or method of:

(i) administering, managing, or otherwise operating an enterprise or organisation, including a technique used in doing or conducting business; or

(ii) producing, analysing or processing financial or management data;

in a field of economic endeavour; and

(b) any computer assisted implementation of a systematic means described in (a).

This definition closely follows a model in the proposed United States Business Method Patent Improvement Act of 2000. The proviso "in a field of economic endeavour" is derived from Australian judicial precedent. The terms "scheme" and "plan" reflect the terminology in Australia, UK and Europe. The inclusion of computer implementation in a separate section clarifies that although most of the controversy relates to business systems which are computer based, the term includes methods which are not computer implemented.

For working purposes, this definition may be summarised as follows:

A business system is a method of operating an enterprise, or of processing financial or management data, in a field of economic endeavour.

Business systems typically involve methods of trading, transacting, financing, resource management, advertising, marketing and customer service. Business systems are directed to the way business information is obtained and used, rather than the development of new 'technologies'.

4.2 Examples of Business Systems

US 5960411, Amazon.com (one click patent)
A method of placing an order for an item without using a shopping cart model, in which when a single action is performed an order request is sent along with an identifier of the purchaser to a server system which uses the request and the purchaser identification to retrieve pre-stored information about the purchaser to generate and fulfil the order.

US 5948061, Signature Financial Group (subject of US State Street decision)
A system and method for managing a portfolio of mutual funds (spokes) as a partnership of funds (a hub).

US 5897620, priceline.com (reverse auction)
A method of using a computer to facilitate buyer-driven conditional purchase offers which involves inputting an offer including an offer price, inputting a payment identifier associated with the offer which specifies a credit card account, outputting the offer to a number of sellers, inputting an acceptance of the offer from a seller, and paying the seller using the payment identifier.

US 5948061, Double Click Inc.
A system and method for targeting the delivery of advertisements over a network such as the Internet by compiling statistics on individual users and networks, tracking the use of the advertisements and transmitting appropriate material according to profiling.

US 6052667, Walker Digital
A method and system for selling an ageing food product as a substitute for an ordered product.

US 6220512, Cooper
A method and system of remotely monitoring business activity at a meeting site by automatically recording individual attendance and using attendee identification to calculate total time costs.

EP 950970 (Hitachi)
A method and system of managing electronic coupons in a networked electronic shopping mall which involves calculating a cost charge for each shop based on coupon issue and use by clients.

5 Growth in Business System Patents

The patenting of business systems is not new. In the United States, patents for paper-based financial apparatus and methods have been granted since the beginnings of the US patent system in the 1790s. These typically involved the manipulation of currency and credit. Automated methods of processing financial and management data have been patented since 1889, when method and apparatus patents were granted for the tabulating and compiling of statistical business information. In Australia, business system patents have been granted in some form since at least 1979. In recent years the development of sophisticated information technologies has generated new opportunities for business systems, which today are usually based on processors, databases and communication systems.

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 and to a lesser extent Australia have experienced sharp growth in business system patents over the last several years. This increase is due to the growing dominance of service industries in the economy, the opportunities generated by the rapid development of information technology and e-commerce, and to recent court decisions confirming the patentability of business systems and computer software.

The United States Patent and Trade Mark Office received 330 business system patent applications in 1995, increasing to 2800 received in 1999, 7800 in 2000 and an estimated 10 000 in 2001. This thirty-fold increase is in comparison with a 50% increase in total US applications over the same period, although the figures suggest the growth in applications for business system patents in the US may be starting to level off. The USPTO granted 899 business system patents in 2000, dropping to 433 in 2001.

IP Australia received 23 'active' business system patent applications in 1995, rising to more than 230 received so far in 2000. 'Active' applications are those which are being actively pursued, such as PCT applications which have entered the national phase. The full extent and nature of the growth in Australian business system patent applications cannot yet be determined because the figures for years 2000 onwards are being continuously updated. The number of granted patents rose from a handful in 1995 to 61 in 2000, then dropped to 46 in 2001.

For both Australia and the US business systems still comprise only a small proportion of the total number of patent applications filed and granted.

6 Current Legal Requirements for Patentability

6.1 International Agreements

6.1.1 TRIPS

The World Trade Organisation Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) provides minimum standards of IP protection, with member countries such as Australia being free to determine the appropriate method of implementing the provisions 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. Articles 27(2) and (3) do however allow inventions to be excluded from patentability for the protection of public order or morality, and allow the exclusion of the following:

- 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 method patents are not specifically excluded under articles 27(2) and (3), business methods could be excluded from patentability if they are not considered as a 'field of technology' and therefore not subject to Article 27.

6.2 Domestic Legislation

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, and not patentable in Europe and the United Kingdom due to their explicit exclusion. It is argued, however, that in practice business systems are also patentable in Europe with appropriate wording of claims. The specific situations for the each of these countries shall now be covered in more detail:

6.2.1 United States

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". Abstract ideas are one of the categories of subject matter considered to be not patentable. Although the United States Patent and Trade Marks Office (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 changed in 1998, with the decision of the US Court of Appeals for the Federal Circuit in *State Street Bank & Trust Co. v. Signature Financial Group Inc.* (State Street), in which 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.

6.2.2 Europe and United Kingdom

The European Patent Office (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 EPC Rules 27 and 29, in order to be patentable an invention must be of a technical character to the extent that it relates to a technical field, is concerned with a technical problem, and has 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 *IBM* case (T1173/97) in 1998 held that if an invention has technical character then it is not excluded from patentability under the "as such" provision in Art. 52(3) EPC. The EPO Board of Appeal decision *Pension Benefits Systems Partnership* of September 2000 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) EPC. In the *Pension Benefits* case, two claims were in issue: a 'method' claim for a method of controlling a pension benefits system, and an 'apparatus' claim for an apparatus for controlling a pension benefits system. The Board held that if a method has a technical character then although it may be a method of doing business, it is not a method of doing business *as such*, and thus may be patentable. In the *Pension Benefits* case, however, the actual method claim involved steps of processing and producing information of purely administrative, actuarial and/or financial character. These steps were typical steps of business and economic methods, and thus did not constitute patentable inventions under Article 52(1) of the EPC. The fact that the claimed method concerned the use of technical means (a computer system) did not necessarily confer a technical character to the method when the method was for a non-technical purpose. The Board held that the invention lacked technical character and thus did not go beyond a method of doing business, *per se*, and was excluded from patentability.

Regarding the apparatus claim, the Board distinguished between the patentability of a "method" compared with an "apparatus" because the specific wording of Art 52(2) excludes "schemes, rule and methods" but does not exclude "apparatuses." 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. While the apparatus claim was not excluded under Art. 52(1) EPC, the claim was nonetheless rejected as lacking inventive step. The application did not solve any technical problem nor did it contribute to the prior art. The improvement claimed was essentially an economic one, which cannot contribute to inventive step, as the application of computer systems to the economic sector is already a general phenomenon.

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* found there must be some technical advance on the prior art for a business system to be patentable. The 1996 *Fujitsu Limited's Application* decision found that an excluded subject may be made patentable if there is a technical contribution.

6.2.3 Japan

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 Japanese Patent Office (JPO) business methods are regarded as "software related" inventions, and are patentable if they have a technical nature, such as involving information technology.

6.2.4 Australia

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 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 - 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)*. The High Court set the requirement which a subject matter must satisfy so as to be a "manner of new manufacture" to be "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.

Given the principles laid down by such cases as the 1902 decision of the Attorney-General in *Coopers Application*, IP Australia's interpretation of NRDC has until recently been 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 a standard rather than a limiting factor.

In 2001 the judgement of the Federal Court in *Welcome Real-Time SA v. Catuity Inc* 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 SA v. Catuity Inc* decision. The *Australian Patent Office Manual of Practice and Procedure Volume 2 - National* [7] 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.

Changes to the Australian patent legislation were introduced on 1 April 2002 to increase the presumption of validity of granted patents and bring Australian practice more into line with international standards. These changes resulted from recommendations made by the Intellectual Property and Competition Review Committee (IPCRC) in their report, *Review of Intellectual Property Legislation under the Competition Principles Agreement* [1], September 2000 (the Ergas report). These changes are expected to aid examiners in assessing business system patents.

7 Related Reviews

7.1 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 as a result of the Competition Principles Agreement between the Commonwealth government and the State governments. The agreement requires that all legislation that has the potential to restrict competition should be subject to periodic review. The IPCR Committee submitted its final report, *Review of Intellectual Property Legislation under the Competition Principles Agreement* [1] (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 believed 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.

Changes to Australian patent legislation were introduced on 1 April 2002, as a result of the Ergas report, to increase the presumption of validity of granted patents and bring Australian practice more into line with international standards. These changes are expected to aid examiners in assessing business system patents:

- Applicants are required to provide all available search results carried out prior to the grant of the patent to the Commissioner of Patents.
- The Commissioner must now be satisfied that on the balance of probabilities the invention satisfies the requirements of patentability, rather than giving the benefit of any doubt to the applicant.
- For the assessment of the inventive step requirement, a citation may comprise two or more documents if the person skilled in the art could be reasonably expected to have ascertained, understood, regarded as relevant and combined the documents.

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 European Patent Office (EPO).

7.2 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?"* [2] 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 enough and urgent European action is needed for clarification;
- business methods should remain unpatentable.

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

Business systems were traditionally thought not worthy of patent protection because they do not require much costly research and development. The advantages of stealing a march on competitors, albeit temporarily, are enough incentive to seek to development them. Also the nature of business system patents can lead to very wide patents which effect 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 favour some form of patentability for business systems have not provided the necessary evidence that patents would increase innovation. 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.

7.3 United States Patent and Trademark Office

7.3.1 Business Methods White Paper

In March 2000, the United States Patent and Trademark Office (USPTO) announced a plan to improve the quality of the examination process in electronic commerce and business system technologies, *Business Methods White Paper* [3] , in response to increased public attention to the Office's operations in 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 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. This initiative may have been superseded by plans to reduce the prior art burden on examiners announced in *The 21st Century Strategic Plan* of June 2002 (see below).
- A second level review of all allowed business system applications.
- Formation of Customer Partnerships to address examination performance.

7.3.2 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* [4]. This plan is in response to dramatic increases in patent application filings throughout the world and the subsequent challenges in timeliness and quality. The plan encompasses all areas of technology, and may have significant impact on business system patents.

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

- 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.

7.4 Japanese Patent Office

In November 2000, the Japanese Patent Office (JPO) released its new policies on business system patents *Policies concerning Business Method Patents* [5]. 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.
- Utilisation of experts from outside organisations and relevant examiner training.

7.5 European Patent Office

In August 2001, the EPO amended the examination guidelines regarding patenting of business systems and computer related inventions[6] due to several Board of Appeal decisions, including the *Pension Benefits Systems Partnership* (2000) and *IBM* (1998). The revised guidelines restate the *ratio* 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 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.

7.6 Trilateral Offices

The Trilateral Cooperation of the EPO, 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* [7]. This report reached the consensus that to merely automate 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.

8 ISSUES

8.1 Economic and IP significance of Business Systems

It may not be appropriate 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 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 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 %). Recent US figures suggest the growth in applications for business system patents may be starting to level off. 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. Some have argued that the last 150 years of US patenting shows four main periods of increased patent activity, each corresponding to the introduction and growth of particular industries. Business systems are said to be part of the latest period which began in the mid 1980s based on microprocessor information sciences and DNA based life sciences.

The sharp fall in US granted patents is possibly due to increased scrutiny of business method patents, resulting in longer assessment periods and a drop in the acceptance rate from 57% to 45%. Recent figures for Australia are not yet clear. The decrease in Australian grants in 2001 may be partly due to IP Australia's resources being directed to the substantial rise in higher priority international work, resulting in less national applications being assessed.

The importance of business system patents may however belie their relatively small numbers, due to a potential for wider impact and scope than other types of inventions.

Issues:

8.1.1 What is the significance of business system patents to the Australian economy and what are the expected future growth trends?

8.1.2 What are the likely implications of business system patents on the growth of Australian businesses and the research sector?

8.1.3 What are the likely implications of business system patents on Australia's export market growth and international competitiveness?

8.2 Encouragement of Innovation and Dissemination of Knowledge

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 which soon become accepted standards.

The counter argument is that the nature of business method innovations is such that many 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.

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.

The patent system has evolved in the context of traditional manufacturing industries, and it has been argued that services industries have different requirements of the IP system. A sui generis approach to business methods may be appropriate. The provision of additional, targeted tools such as competition and licensing laws may be able to complement the existing patent system.

Issues:

8.2.1 Do business system patents encourage innovation and the dissemination of knowledge?

8.2.2 Are there fundamental business processes which, if patented, could inhibit innovation or impose significant costs on third parties, or is it likely that the development of alternative business systems would be encouraged?

8.2.3 What are the implications of business system patents on Australian industry generally? Are business system patents likely to inhibit growth in the market place?

8.3 Australian Patent Laws and Practices

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 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 NRDC 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. IP Australia no longer requires 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.

Changes to Australian patent legislation were introduced on 1 April 2002 to increase the presumption of validity of granted patents and bring Australian practice in line with international standards, as recommended by the Ergas report. These changes are expected to aid examiners in assessing business method patents.

Some have argued that the internet and e-commerce industries are such rapidly changing areas that 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 a chilling effect on venture capital for the industry. In the Ergas report, the Committee did not consider the term to require change. According to TRIPS, standard patents have a minimum possible grant of twenty years, with some extensions available for pharmaceuticals. Only if an invention is not considered as within a "field of technology" within the meaning of s27 of the TRIPS will the invention not be subject to the twenty year term set by TRIPS and thus potentially subject to a shorter time period.

Another issue is the time taken for a standard patent to be granted, and, although this is largely in the applicant's control, it typically takes 2-3 years in Australia. This may not be appropriate 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.

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. As outlined earlier, offices such as the USPTO and JPO have taken a variety of steps to address this problem.

- Absence of published prior art. Many offices such as IP Australia can only object to patent applications on the basis of published documents. Until recently there has been very little business system material for patent offices to search and base their assessments on, particularly in patent literature. Both the JPO and USPTO have significantly expanded the number of non-patent literature databases searched. IP Australia has similarly reassessed search strategies for business system patents.

Issues:

8.3.1 Does current Australian patent legislation and practice in relation to business system patents provide an appropriate balance between innovation, access to technology and economic growth?

8.3.2 Should Australia include technical implementation as a requirement for patentability?

8.3.3 What is the anticipated impact of the patent legislative changes, introduced in April 2002, which aim to increase the presumption of validity of granted patents?

8.3.4 Is the Ergas report correct in stating that most business methods would fail the standard tests of patentability?

8.3.5 Should there be special patent procedures for processing business system patents?

8.3.6 Should business systems be considered to be within a "field of technology" as referred to in s27 of the TRIPS agreement?

8.3.7 Is the 20 year term of a standard patent grant appropriate for business systems, or would the 8 year term of an innovation patent be more appropriate?

8.3.8 Are business system patents being assessed within an appropriate timeframe?

8.3.9 Are granted business system patents of sufficient quality? Is the standard for inventive step being correctly applied?

8.3.10 Do Australian patent examiners have appropriate training and expertise to assess business system patents? Are more resources warranted?

8.3.11 Is IP Australia making appropriate use of non-patent literature? Should more active sharing of information with other offices be explored?

8.4 Public Awareness and Confidence

Literature suggests that patent strategies are relatively underdeveloped in industries based on software and e-commerce. 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.

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

Another issue involves 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.

Issues:

8.4.1 Are Australian businesses properly equipped to deal with business system patents?

8.4.2 Are there sufficient information and search facilities available to assist the Australian public seeking to protect their intellectual property or avoid infringement? If not, what facilities should be instituted?

8.4.3 How should issues of jurisdiction with respect to business system patents be dealt with?

9 Conclusion

As previously stated, the purpose of this Issues Paper is to stimulate public discussion on issues relating to the patenting of business systems. The issues raised in this paper are not considered to be conclusive or exhaustive and it is hoped other issues and relevant information will be identified for discussion.

10 ACIP Business Systems Review Process

Submissions by interested parties in response to this Issues Paper will be due by 10 September 2002. Formal meetings with interested parties to discuss their responses are also expected to take place in September - October 2002.

By November 2002 submissions will have been considered and decisions made on how to proceed with the process. The ACIP working party expect to prepare and release a draft report and invite submissions in February 2003. Submissions to the draft report will be due in April 2003.

Further consultations may take place in April-May 2003, followed by a final report to ACIP in June 2003. The final report will either make recommendations to the Parliamentary Secretary or highlight areas where further investigation is required.

11 References

1. *Review of Intellectual Property Legislation under the Competition Principles Agreement*, Intellectual Property and Competition Review Committee (IPCRC), 30 September 2000, http://www.ipcr.gov.au

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

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

4. *The 21st Century Strategic Plan*, USPTO, 3 June 2002,
http://www.uspto.gov/web/offices/com/strat2001/index.htm

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

6. *Amendment of the Guidelines for Examination in the European Patent Office regarding the patentability of business methods and computer-related inventions*, EPO, August 2001,
http://www.european-patent-office.org/news/info/2001_10_05_e.htm

7. *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