

Australian Government
Solicitor Seminar

**Management of Intellectual
Property in the Public Sector**

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INTRODUCTION

"Intellectual Property refers to rights granted by law in relation to the fruits of human creative activity."¹

We have entered what is commonly referred to as the 'Information Age', where information and ideas have overtaken agricultural produce and manufactured goods as key commodities. Our wealth and economic strength are now being measured in terms of what we know and how well we translate and use this knowledge. The OECD has estimated that over one half of the wealth generated in developed economies is knowledge-based. As well, competition is increasingly globally based.

Creating a competitive edge is being driven more and more by ideas and innovation. The pro-active management of intellectual property (IP) in a more results oriented environment is becoming an increasingly important consideration for public sector agencies and other bodies in maintaining their capabilities to achieve required outputs and outcomes or, more simply, results. As well, there is a need to manage actively the risks associated with, for example, the inadvertent use of information and/or materials copied off the Internet.

As governments advance into the Information Age, the value of, and demand for, government information and services will increase significantly. It is vital that governments are able to successfully manage, develop and use our available intellectual assets to meet such demands. Given the increasing interaction between the public and private sectors, these demands have much wider ramifications, including opportunities.

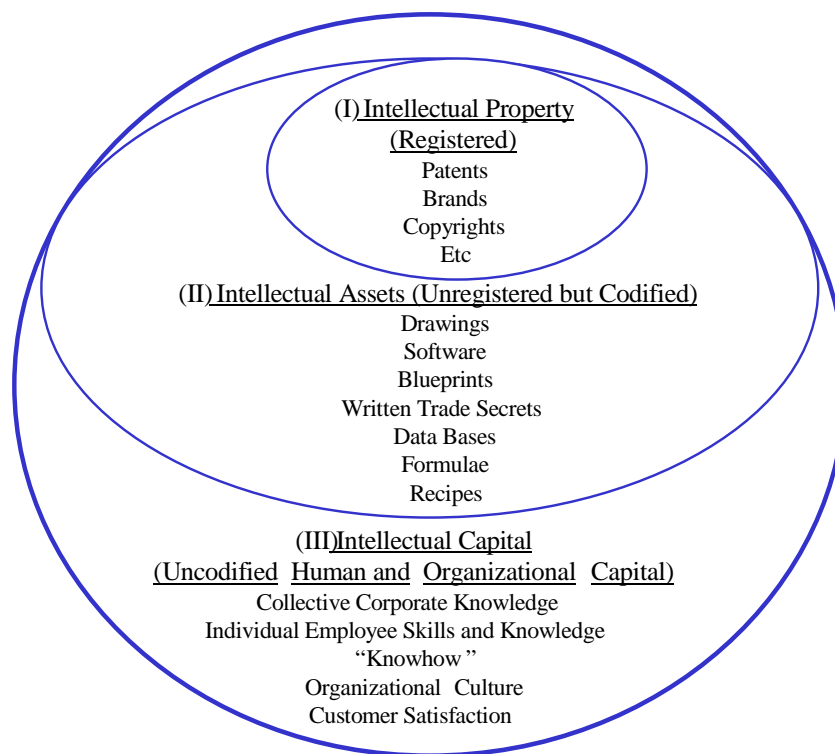
Historically, the development of IP within public sectors has not been well recognised nor extensively commercialised, but with some notable exceptions. As one of Australia's largest users and managers of information, the Australian public sector (APS) is a significant contributor of IP, particularly in the area of systems development. In the past, this has not been well exploited for the benefit of the Commonwealth nor for the broader public good. The South Australian Auditor-General captured this imperative in a recent report, where he states:

Intellectual property and government information represent major government assets. In many cases significant expenditure has been committed to the development of these assets and they should be managed in accordance with prudent commercial, financial and budgetary practices.²

The reasons public sectors have not traditionally exploited intellectual capital to best effect are most likely associated with the perception that the latter is not a core function of government, together with the lack of skills, experience and expertise necessary to identify and promulgate intellectual property. I have previously spoken about concerns with the loss of corporate knowledge.³ We are well aware that knowledge management is basically about people and systems. Agencies will understand that their people are an important complement to IP development. With management of information now becoming a core (if not the core) business of some agencies, the areas of information and IP management are also starting to attract increasing attention within governments and Parliaments.

IP is part of the larger concept of knowledge, innovation and intellectual property.⁴ The following figure helps put IP in the wider perspective of corporate knowledge that I want to emphasise today. It may also assist in clarifying the concepts used, and their interrelationships, particularly when speaking about the nature and treatment of intangible assets and the Knowledge Management Framework.

Figure 1: Groupings within the Corporate Knowledge Framework



Source: *Valuing Corporate Knowledge and Intangible Assets: Some General Principles*⁵

Categories (I) and (II) in Figure 1 simply make the distinction between IP that is registered (say, with a Patent) and that which is unregistered but recognisable in a tangible fashion and central to an organisation’s core business, continuity and success. Category (III) is the least tangible (uncodified) asset and is basically tacit intellectual human capital. While the author is concerned to establish a general set of principles for the valuation of intangible assets, as well as corporate knowledge, my purpose is to stress IP as part of a whole knowledge management approach. The suggestion is that, if we are more focussed on the comprehensive strategy required for successful knowledge management, and which is shared by all our people, it is likely that we will not only generate more IP but we will also develop the capacity for better ‘packaging’ and assessing its value both to the organisation itself and to maximise its commercial worth. The unpalatable fact is that:

*many public sector entities do not know what they own in the form of intangible assets, such as intellectual property.*⁶

Last year, I was very interested to read a paper entitled ‘Exporting the APS’⁷ prepared as part of the celebrations for the Centenary of the Service. The paper contained 57 case studies

from around 25 agencies reflecting ‘The International Impact of APS Innovations’. While it is invidious to pick out particular innovations which clearly have significant embedded IP, their wide-ranging nature is worth illustrating. We have plastic banknotes and a multibeam antenna system from the CSIRO; the meat safety enhancement program from AQIS; the Australian job search touch screens from the Department of Employment, Workforce Relations and Small Business; the advance passenger processing system from the Department of Immigration and Multicultural Affairs and the Australian Customs Service; the passport issuing system from the Departments of Foreign Affairs and Trade and of Communications, Information Technology and the Arts; the merged audio visual information system (MAVIS) from Screensound Australia; and the manual for designing and implementing record-keeping systems (DIRKS) from the National Archives of Australia. These are all internationally accepted products with wide-ranging appeal. The obvious questions are how well are we promoting them; maximising financial returns; and using them as a platform for future similar developments.

This presentation focuses on the management of intellectual property in the public sector. It begins with a brief overview of the legislative framework that governs IP, commenting on the different related developments within public sectors across Australia as well as overseas. It then explores some of the options for arrangements for ownership and licensing of government IP with a particular emphasis on the management of risks associated with these arrangements.

Given the lack of a direct accounting standard dealing with measuring and reporting IP in financial statements, and the differing views of standard setting bodies around the world, I thought it might also be useful to discuss the issue of accounting for intellectual property. I will provide a brief overview of the current situation and conclude by examining some of emerging developments in an attempt to provide the basis for a more consistent approach to accounting for IP. I will conclude with some general observations.

PUBLIC SECTOR INVOLVEMENT WITH IP

As with the private sector, IP within the public sector is governed by a comprehensive legislative framework that protects Intellectual Property in Australia. Commonwealth legislation protects trademarks, patents, copyright, plant varieties, circuit layouts and designs. I do not intend to delve into the specifics of these Acts. However, I do want to stress their importance, particularly in the role they play in setting out the basis upon which ownership of IP rights may be licensed or assigned. In addition to these statutes, common law protects any information that is agreed to be confidential or is provided under circumstances where it could reasonably be inferred to be confidential. It is clearly essential to ensure that, for example in the case of patents, designs or trademarks, such assets have been validly registered under the appropriate legislation. No doubt you will hear a lot more of that later today.

IP within the Commonwealth public sector

Public sector agencies have to manage IP in ways that are different from the more familiar crown copyright and research and development (R&D). The new contexts include:

- IP required for agency activities (for example software). The majority of this IP is obtained from external parties through purchase or licence agreements;
- IP developed by the agency during routine operations. Such innovation is often gradual and unplanned; and
- data collections and registers made valuable by tools that can retrieve and manipulate volumes of information. The new uses of such assets raise issues of privacy, confidentiality, access and pricing.⁸

When it comes to the Commonwealth, general obligations are imposed on agencies and their accountable officers in relation to the management and control of public assets under the *Financial Management and Accountability (FMA) Act 1997*. In particular, the Act requires that chief executive officers manage their agencies in such a way that promotes the efficient, effective and ethical use of the resources for which the agency is responsible. These obligations extend to intellectual property assets. However, consistent with the devolution of responsibilities to agencies, little guidance is provided to agencies as to how these obligations should be fulfilled.

With the exception of a few obvious agencies, such as the Department of Defence (a recent survey conducted by the Department of Defence in relation to its acquisition contracts concluded that, since 1994, over 50 per cent provided industry with ownership of IP developed under contract⁹) and the CSIRO, the Commonwealth tends not to be a large producer of traditional IP. For example, patent rights are currently of minor relevance to many agencies, as too are circuit layout rights. This does not mean, however, that we can afford to ignore IP.

As indicated earlier, the APS has a considerable amount of intellectual assets and the capacity to turn these into valuable IP. This is particularly applicable to the highly developed and sophisticated information systems that exist in government departments that could, in some cases, be commercialised.

This potential has been recognised at a Federal level. The Prime Minister's 1997 statement '*Investing for Growth*'¹⁰ made a commitment to developing guidelines to assist the information industry commercialise IP, particularly IP created under Government IT contracts. The "*Commonwealth IT IP Guidelines*"¹¹ were subsequently issued in 2000. The Guide states that its objective is to "Maximise the benefits from Commonwealth Information Technology (IT) related Intellectual Property (IP) for the Australian Community as a whole"¹². The document aims to be a practical guide to improving the awareness of available options; to assist managers to identify IP issues early and accurately; and to balance ownership and licensing rights between agencies and the private sector. The guidelines are a step in the right direction, highlighting the importance of IP and providing guidance on this complex issue.

More recently, the Minister for Industry Science and Resources has announced that Melbourne University has been selected to establish and run a multi-disciplinary IP research centre. The Centre is part of the Commonwealth Government's *Backing Australia's Ability* strategy and will help ensure Australian businesses and researchers benefit from an effective IP system. The objectives of the centre include:

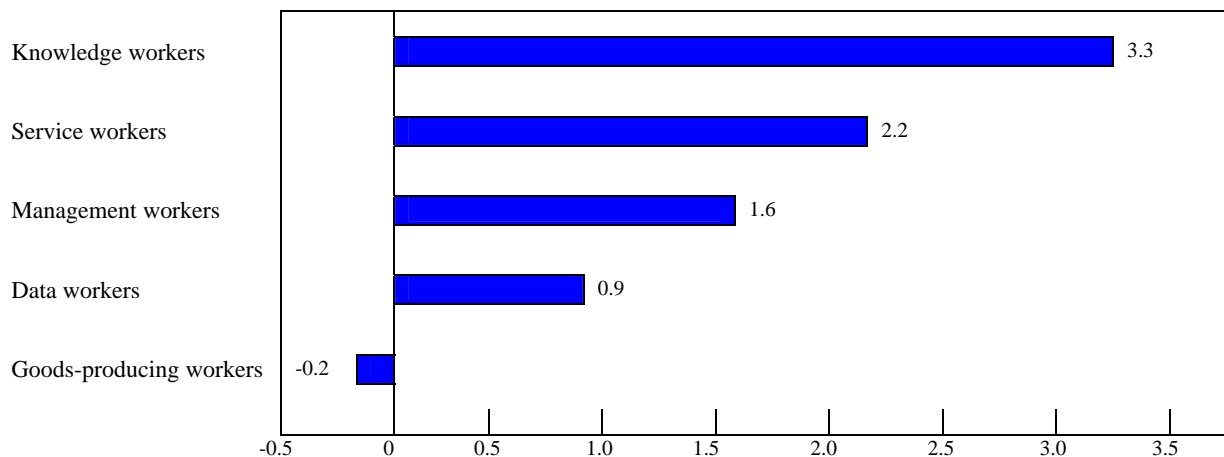
- delivering high quality research to underpin effective policy development in relation to IP;
- development of best commercial practice by firms in the use of IP; and
- promoting healthy and informed debate on IP protection issues of importance to Australia.¹³

Knowledge Management

Knowledge may be defined as information combined with experience, context, interpretation and reflection. It is therefore a high value form of information that is ready to apply to decisions and actions. The rising importance of knowledge-intensive employment is illustrated in the following figure relating to all OECD countries. However, if real benefits are to be realised, the right skills, culture and commercial acumen must be put in place, bearing in mind the nature of public service and the associated responsibility and accountability to citizens. While implicit knowledge is largely stored in computer systems today, the major management task is to deal purposely with the tacit knowledge of our people. It is up to business strategy to identify ‘missing’ knowledge.¹⁴ While perhaps not recognised as such, knowledge management has always been at the core of what the public sector does, and is inseparable from strategy, planning, consultation and program implementation.

Figure 2: The rising importance of knowledge-intensive employment

Employment growth by group of occupations,
Average annual percentage change, 1992-1999



Note: There is a skill-bias in job creation in all OECD countries considered in the Figure (the US and EU countries). Knowledge-intensive employment (scientists, engineers, ICT specialists, etc.) has grown much faster than other types of employment.

Source: Organisation for Economic Co-operation and Development 2001. *The New Economy: Beyond the Hype. Final Report on the OECD Growth Project.* p.14.

Knowledge management is a process for capturing the knowledge gained by individuals and spreading it across the organisation in order to increase the capability of the organisation to

create new knowledge and embody it in products, services and systems. It has been observed that:

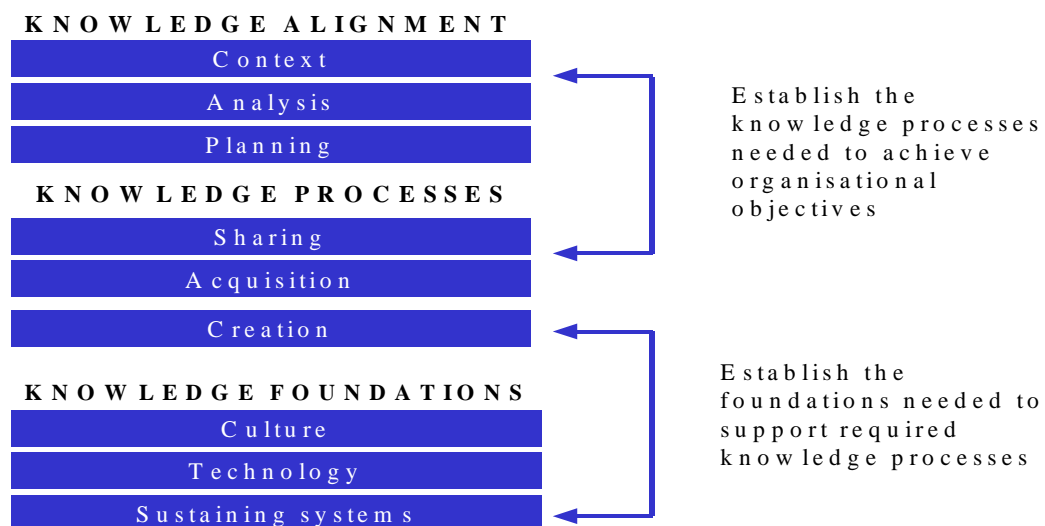
The ultimate objective of managing knowledge is to capitalise on the intellectual capital, specifically to encourage knowledge transfer and support knowledge sharing and reuse¹⁵.

Standards Australia has recently produced a Knowledge Management Framework (HB275-2001) organised in the following five sections:

- Delivering Performance Improvement;
- Introduction to Knowledge Management;
- Knowledge Alignment;
- Knowledge Processes; and
- Knowledge Foundations.

Figure 3 illustrates the main elements of the Framework and their interrelationships.

Figure 3 : Major Elements of the Knowledge Management Framework and their Interrelationships



The framework was developed with assistance from more than 100 organisations and includes 36 case studies (HB263-2001) examining how leading international organisations have used knowledge processes to achieve their goals. More information can be obtained from Standards Australia KM Portal at www.knowledge.standards.com.au¹⁶

Arguably, the most significant asset of any government is its information and knowledge. As Jon Desenberg states in a recent article in iMP magazine:

*It is hard to imagine what the Government's combined knowledge and experiences would be worth if they could be fully utilised. Getting to it, sharing it and putting it to work is the critical issue for the government today.*¹⁷

Improving the management of information and knowledge may not lead to direct tangible rewards in the form attributable to most IP such as dividends or royalties. However, it may lead to other significant rewards such as the streamlining of procedures, more effective and efficient methods of delivering services. In addition, in some cases, it could lead to the identification of a possible product that can be developed and commercialised in the regular sense. In a recent article, Professor Thomas Clarke observes that:

*The Corporate interest in knowledge management has been fuelled by the remarkable increase in the market valuation of intellectual capital. In this context it is assumed the purpose of knowledge management is to create conditions in which people may integrate specialist knowledge to produce goods or services of increasingly higher value.*¹⁸

An OECD paper¹⁹, considering the issue of knowledge management within the public sector, describes two opportunities for the public sector from a knowledge economy. The first of these is the opportunity for improvement in organisational effectiveness:

*By improving individual effectiveness, transferring information and knowledge to the organisation level, and ultimately making it easily accessible so that individuals can take effective and more informed decisions.*²⁰

Importantly, there is a balance to be struck between promoting innovation in the public and private sectors and ensuring equal access to knowledge, that is, balancing property rights and equity considerations in a democratic society.

Organisations around the world have realised the benefits of making better use of their knowledge and it is an area that is justifiably receiving increasing attention across the Australian Public Sector. For example, the Minister for Defence recently referred to the advantages that can be achieved by combining well-trained people with the effective use of technology which he referred to as the 'knowledge edge'²¹. The Minister also noted that the Head of the Defence Science and Technology Organisation will bring to the Prime Minister's Science Engineering and Innovation Council 'a strong background of innovative research and practical experience transitioning its intellectual property' into the private sector²².

IP developments within State government jurisdictions

As with the APS, the issue of managing intellectual property has been gaining increasing attention across State government jurisdictions in recent years.

Western Australia in particular has taken a leading role. It began addressing the subject in 1997 when it produced a series of IP policy documents and established a Government Intellectual Property Policy Council. The focus and the role of the Council has extended and developed over the last few years and in 2000 the WA Cabinet approved the *Government Intellectual Property Policy 2000*²³. The Policy seeks to "ensure the effective management

of IP in the public sector and to support the use and commercialisation of public sector intellectual property for the benefit of the state²⁴.

South Australia has also been at the forefront of this issue. In 1996 it issued a policy relating to IP in Government software. The South Australian Auditor-General has taken a keen interest and has produced a series of annual reports dealing with IP-management issues with a specific focus on IT. The reports provide some very useful guidance on managing IP, particularly when involved in arrangements with third parties. I will elaborate further on this in the discussion on risk management later in this paper.

The Audit Office of New South Wales conducted a performance audit in 2001 examining the management of intellectual property.²⁵ The audit found that:

- some agencies do not understand what IP is and are not aware of IP assets under their control;
- most agencies do not maintain a register of their IP assets;
- many agencies do not have adequate policies and systems to manage IP;
- few agencies recognise or reward innovation leading to IP; and
- most agencies have not allocated adequate resources for management of IP²⁶.

The report made several recommendations to assist agencies manage IP better. This included recommending an integrated whole-of-government framework to help improve the management of IP. The framework should:

- establish a cross-agency task force to champion the implementation of the IP policy framework;
- integrate IP management with other management and whole-of-government policies including risk, information, procurement and human resource management;
- improve coordination among key agencies responsible for developing an integrated approach to IP;
- establish accountability for the development of whole-of-government guidelines to assist agencies manage IP;
- provide the public sector with a 'model IP policy' or IP guidelines to support the management of IP by agencies;
- clarify the mandate of agencies to commercialise IP;
- require each CEO to establish appropriate accountability arrangements for the management of IP;
- require each agency to develop policies to manage IP in accordance with the agency's major functions;
- require agencies to maintain a register of IP assets, and where appropriate, to account for those assets;
- ensure that legal and commercial IP expertise is readily available to help agencies manage IP; and

- establish systems to foster and encourage innovation across the public sector.²⁷

In addition to the performance audit report the NSW Audit Office also issued a better practice guide dealing with the management of IP²⁸. The guide draws on the audit report and contains a checklist to assist agencies develop policies and procedures to manage IP more efficiently and effectively.

The Queensland government is undertaking a review of the Information Access and Pricing Policy that operates to protect Government intellectual property. The review has been prompted by a need to better manage IP and to ensure its protection.

Whilst the level of detail and comprehensiveness of policy documents vary across the states, there are some underlying principles which are common to the majority of state policies. These include:

- public authorities should exercise due care and diligence in the management of IP assets owned or used. This includes taking appropriate steps to identify, secure, maintain and preserve IP;
- public authorities should endeavour to commercialise IP, but only if it doesn't interfere significantly with their operational activities;
- commercialisation should be no more than an ancillary activity of the public authority and not become part of their core business;
- public authorities should take a risk-based approach to IP management particularly in relation to commercialisation where the public authority should not be exposed to unnecessary or disproportionate risk; and
- given the complexities associated with IP assets, assistance should be sought from experts particularly when considering commercialisation.

International experiences

IP rights have gained international standing as some of the most important rights that need protecting. It is not surprising that governments overseas have therefore focussed their attention on IP management.

The United Kingdom (UK) Government is encouraging public bodies to make better use of their IP assets and has focussed on the commercial exploitation of the outputs of publicly funded research in a variety of ways including joint ventures with private sector partners. In 1999 the UK government published a White Paper "*The Future Management of Crown Copyright*"²⁹ that dealt with the issue of availability and access to government information and government produced materials. The paper allows government departments complete freedom to decide how works, which they originate, are distributed or commercialised with the exception of Acts of Parliament and Statutory Instruments. The Paper states:

public sector information assets have potential, not only in supporting the business of government, but also in supporting the economy as a whole. ...Where value has been added, or information developed and created within government, is enhanced beyond core obligations or statutory duties to

*produce that raw information, then such information is potentially tradeable.
The highly competitive information market will regulate its value.*³⁰

The UK National Audit Office presented a paper *Commercialisation Projects in the UK and their Audit* (quoted earlier) at a recent meeting of international government auditors in Budapest. The paper highlights the government's promotion of transferring knowledge through commercialisation projects and identifies key aspects that public bodies should consider when exploring commercialisation projects, including incentive regimes³¹. The UK NAO intends to publish further reports on commercialisation projects to provide guidance on how best to manage these types of projects.

In the United States (US), the government does not generally enjoy copyright over materials it publishes, as they are considered to be in the public domain. Many Federal Government Agencies do, however, establish collaborative arrangements with the private sector by entering into formal Cooperative Research and Development Agreements. Nevertheless, it is argued that copyright arrangements are being eroded by technology, notably digital technology.

COMMERCIALISATION MODELS

My office conducted an audit of the then Department of Education, Training and Youth Affairs' (DETYA's) International Services (DIS) business back in 1998³². The DIS was established to promote and expand export opportunities on a commercial basis in the fields of employment services, education and training. The review acknowledged the differences of operating a commercial business within the APS. "A fundamental difference between APS agencies and commercial operations is that APS agencies are not working towards the single purpose of the bottom line profit or increasing shareholder value".³³

This goes to the point that the creation, development and commercialisation of intellectual property for financial gain are not core activities of government. This does not mean that government agencies should not undertake such commercialisation. Arguably, if Commonwealth agency chief executives are to meet their legislative obligations of making efficient and effective use of Commonwealth resources, such commercialisation should be undertaken. However, the key principle to remember when considering commercialisation is that it should be complementary to, and not detrimental toward, the operational activities of the agency. Any collaboration should be in the public as well as private interest.

There are some clear benefits to government in forming an alliance with the private sector. The Commonwealth's Information Technology IP Guidelines³⁴ make mention of a few of these benefits, specifically:

- industry is more likely to develop IP that has commercialisation potential, in addition to meeting client specifications;
- by allowing scope for commercialisation, Government will benefit from the use of the best the industry has to offer;
- the right to commercialise IP is a direct means by which Government can encourage innovation in the IT industry in Australia;

- combined with direct funding and other incentive programs, this would place the Australian IT industry in an improved position from which to compete internationally; and
- substantial opportunities are available if Australia moves quickly to market government and administrative systems in Asia and other regions.

Within the Commonwealth, commercial alliances between government and the private sector are becoming more prevalent. My office conducted an audit of joint commercial arrangements of all Commonwealth funded budget entities in 1996³⁵. It was established that, at the time, there were some 61 joint commercial arrangements in 32 departments, agencies and statutory authorities. It is likely that this number will have grown considerably since then.

Various routes and structures are available to public bodies in undertaking such commercialisation. These range from the Commonwealth retaining ownership and taking full responsibility for marketing and supplying the product, to outright sale, where the agency would receive a once off payment but lose effective control over the future of the product. They represent the extremes. However, there are middle ground options such as licensing arrangements with a third party or the setting up of a spin-off company or joint venture where the agency retains some interest. The choice of structure will be dependent on the individual circumstances. No one structure will suit all situations.

In a recent article in “The Information Age” it was claimed that companies typically use less than 20 per cent of the intellectual assets they develop.³⁶ It is important that agencies are thoroughly prepared for any due diligence process put in place to establish the validity of the asset and its ownership. In particular, that includes any potential, or actual, third party interest involving, for example, any licensing agreement.

The next section of this paper illustrates, and makes observations, in relation to three models utilised within public sector organisations:

- the joint venture model;
- in-house commercialisation; and
- outsourcing arrangements.

Joint venture arrangements

Recently, the Auditor-General and Comptroller in the UK investigated a commercial arrangement³⁷ between the Radiocommunication Agency, an executive agency of the Department of Trade and Industry and CMG UK Ltd, a leading European information technology services company. This arrangement was reviewed as it was the first time that a public sector agency had joined with a private sector company and formed a joint venture company. With no similar public sector project to serve as a model there was concern as to whether the arrangement would be successful and whether the risks involved could be appropriately managed.

The relationship arrangement was instigated as a result of the Radiocommunication Agency becoming concerned that it was heavily reliant on costly external contractors to deliver its IT

needs. The agency was keen to achieve financial savings by bringing this reliance to an end. The agency considered a range of options including outsourcing but was concerned about transferring business critical systems to an external contractor. Further, the agency regularly received requests for assistance from overseas spectrum radio administrations and felt that there was potential to exploit in-house expertise commercially in the form of consultancy services and the possible sale of its spectrum management IT systems to overseas agencies.

The agency decided to link the delivery of IT systems and the potential commercial exploitation as one project. Following a lengthy tender process to secure a new partner, CMG was chosen and the two parties established a joint venture company, Radio Spectrum International.

The Auditor-General's review of the arrangement sought to examine whether the overall process of choosing a partner and establishing a joint venture company was well managed and whether the overall arrangement was beneficial to the agency. It was hoped that some 'lessons learned' could provide guidance to other agencies considering this type of arrangement.

Overall, the audit found that the management of the arrangement was handled well. In particular, it was noted that, as a result of the already strong working relationship enjoyed by the agency and CMG, the partnership had not introduced any new risks to the agency. This was largely a result of CMG providing an indemnity against costs and liabilities arising from the provision of services by Radio Spectrum International.

CMG further undertook to provide all working capital needed by the joint venture company and to fund initial marketing expenditure. Radio Spectrum International was granted an exclusive licence to use Crown copyright materials and the agency's intellectual property rights for the purpose of providing consultancy services and to sub licence these rights to customers. Most importantly, the agency ensured appropriate safeguards were included in the contract to protect its name and reputation. For example, Radio Spectrum International was required to inform the agency of prospective customers and obtain the consent of the agency prior to entering into agreements.

The arrangement has been particularly successful. On the commercialisation side, Radio Spectrum International has won a number of consultancy contracts around the world. The agency has experienced savings in the delivery of its IT requirements estimated to be in the vicinity of 10 million pounds. Radio Spectrum International made a profit after tax of 1.3 million pounds. Given the size of this profit, the agency was able to negotiate a better price for the provision of its IT needs. This was only possible as the structure of the partnership ensured that the profits generated were transparent. The agency also profits through dividend payments, which have so far totalled just under 250 thousand pounds.

The report highlights a number of matters that could have been improved on and are worth considering in similar arrangements in future. These are:

- establishing clear guidelines at the outset, as this will reduce the time taken to find a suitable partner and encourage a positive response from potential bidders;
- establishing existing service levels, as this will provide a basis for accurate comparison to subsequent changes in performance;

- recognising the importance of aligning business interests, trust-based relationships and effective collaboration but also the need to build a strong contractual framework; and
- having a formal process for deciding the percentage stake to take in a joint venture company. This is particularly important as, where the public sector body takes a majority interest, it will be subject to normal government accountability requirements. This may deter potential partners in pursuit of purely commercial enterprises. A detailed evaluation of each partner's contribution should be done as a matter of good practice.³⁸

These examples provide lessons for public service managers in dealing successfully with such arrangements, particularly where there is limited relevant agency experience. I should note that, in a more collaborative environment, it should be possible to resolve any apparent problems perceived with government accountability requirements including, in my view, the possibility of some level of sharing of those requirements for mutual benefit.

In-house commercialisation

The second example of commercialisation that I would like to discuss relates to the International Services Business within the International Division of DETYA (DIS). In contrast to the previous example, this arrangement does not involve the private sector but rather the setting up of a commercial arm within a public sector department.

The DIS mission, as stated in its Business Plan, is:

to promote and expand export opportunities on a commercial basis in the fields of employment services, education and training, particularly where DETYA has expertise unique to its organisation and services.

The DIS was established under an arrangement with the Department of Finance and Administration which allowed receipts made by the agency to be retained and re-appropriated.

The audit examined:

- relevant corporate management processes, including the definition of the business process and strategy, planning processes including the setting of goals and the development of financial plans;
- the core service process, including development of a market and customer strategy, development of strategies to promote services, managing service provision through the development of the proposed services for inclusion in tenders, and quality assurance processes; and
- related support processes, including costing of proposed services, managing budgets and resource allocations and managing financial risk.

Overall, the ANAO found that most elements of DIS's business were operating successfully. There were, however, areas identified where significant improvements could be made

resulting from the lack of a defined business purpose. Most of the recommendations and comments within this report are relevant to any commercial operation, particularly one operating within the APS. As in the earlier United Kingdom example, the need to establish a clear business purpose as early as possible in the life of the business is paramount.

*It is from such decisions that planning, management frameworks, support systems, monitoring and reporting arrangements are delivered.*³⁹

Other recommendations and comments included the requirement to:

- establish a comprehensive risk management plan to help guide and effectively manage business planning operations. This is particularly relevant given the commercial nature of the business and the fact that it was involved in exporting services overseas;
- develop an accrual-based financial planning framework, including a detailed costing methodology where full costs of production are properly determined and taken into account. The report indicated that “a sound understanding of costs is fundamental to business success whatever the level of commerciality. As well, a more precise method of quantifying costs and incorporating these in fee-setting considerations is considered to be essential”⁴⁰; and
- establish a debt management policy in order to maximise the recovery of costs in a way which meets business objectives.

A report, on a recent meeting of the OECD Council at Ministerial Level, warned that policy makers should be aware of the risks of too much commercialisation which could, for example, reduce the quality of scientific research and education. The report identified the good practice of granting ownership of intellectual property rights to the performing research organisation while ensuring that individual researchers enjoy a fair share of resulting royalties.⁴¹

The better practice guide issued by the Audit Office of NSW⁴², relating to the management of intellectual property, also provides guidance on matters to examine when considering commercialisation. These include examining if the proposed commercialisation arrangement:

- establishes clear responsibilities, accountabilities and agreed outcomes both within the agency and within the other parties to the arrangement;
- addresses the issue of transparency and potential conflict of interest;
- takes reasonable steps to manage the risks associated with the project. These may include warranties and legal arrangements that limit or indemnify against liability; and
- sets conditions to ensure that IP is developed and exploited for the benefit of NSW.⁴³

Outsourcing

The contracting out, or outsourcing, of functions previously delivered by public sector agencies have become a major feature of the changing public sector and have implications for intellectual property as outlined in the following quote from the South Australian Auditor-General:

*Outsourcing is by its nature predicated on transferring the use of infrastructure, and therefore intellectual property assets, to outsource providers. Government has become highly, and in some cases totally, dependent upon access to the infrastructure used to deliver government services. Without a guarantee of availability to these intellectual property assets, the Government is not in a position to ensure it can effectively govern.*⁴⁴

Outsourcing also brings risks, which must be managed effectively. When an agency enters into an outsourcing arrangement, information held by government is often shared with the third party. As custodian of this information, the onus is on the government to ensure appropriate measures are in place to safeguard and ensure its proper use. My office has conducted several performance audits of outsourcing arrangements.⁴⁵ The main message flowing from those audits is that savings and other benefits do not automatically flow from outsourcing. Just as commercial arrangements with the private sector in relation to IP require clear and unambiguous contracts detailing each party's role, responsibilities and rights, so too do outsourcing contracts.

Managing the risks associated with the delivery of services by the public sector requires the development of specialised skills in commercialisation, negotiation and, most importantly, contract management. Where the agency does not hold the necessary management expertise, it should contract in, or acquire, the needed expertise.

A final point I would like to make regarding outsourcing is that it does not absolve the agency from the ultimate responsibility for ensuring the efficient, effective and ethical delivery of the service or program. The bottom line, as is often reiterated in Parliament, is that accountability cannot be outsourced⁴⁶. These comments reflect that:

*Accountability and responsibility are two parts of a larger whole : whoever is 'responsible for' a policy or program is also 'accountable to' some authority for their performance within their sphere of responsibility.*⁴⁷

However, in a practical sense, the increasing trend towards greater collaboration, partnering and/or networking across Federal Government agencies, across levels of government and with the private sector, has not only raised questions of appropriate risk allocation but also about notions of shared responsibility/accountability.

RISK MANAGEMENT

Arrangements can be made with the private sector to allow public sector agencies to take advantage of private sector experience and expertise in developing and marketing new ideas. As outlined above, such arrangements can be quite diverse and complex and introduce different risks to those in the more traditional public service administrative models.

If such arrangements are to be successful, these risks must be identified and managed effectively by the public sector participants. That is, when considering developing and commercialising IP, agencies should be aware they are responsible for ensuring that they have appropriate mechanisms in place to protect assets and that they have taken steps to

identify and manage the risks involved. To quote the United Kingdom National Audit Office again:

*A key aspect of a successful commercialisation project is to know the risks you are taking and to establish responsibilities for those managing the risks. This will involve obtaining relevant timely information, making contingency plans, and being alert for opportunities, because there are upside as well as downside risks.*⁴⁸

This section of the paper discusses some common risk areas associated with the commercialisation arrangements.

Common risk areas

While many aspects of intellectual property risks are not new, the chances of finding oneself in an adverse position on these issues has increased. There are, however, steps that can be taken to address these risks. As stated in a recent article in 'Global Risk', "it is wise to understand what the exposures are, how they can be mitigated, and the risk transfer vehicles available."⁴⁹

Both the *Copyright Act 1968* and the *Patents Act 1990* grant to the Crown special rights as follows:

- a) Subject to any agreement to the contrary, the Crown is the owner of copyright in certain works and subject matter and works made by , or under the direction of, the Crown⁵⁰.
- b) In the event that the Crown does not own the intellectual property rights, the Crown effectively holds a compulsory statutory licence which permits it to use copyright materials and an invention/patent, provided such use is for the services of the Crown and on the terms and conditions agreed by the parties (or in default of the agreement, as determined)⁵¹.

While these statutes establish ownership, such ownership can be passed to another party by way of an agreement in writing. One of the areas of greatest risk in relation to commercialisation projects is the written agreement or contract. In the absence of such a contract, uncertainties and disputes may arise in relation to:

- who is entitled to income arising from commercialisation;
- who is entitled to ownership and use of improvements to the intellectual property;
- who is to pay for the expense of maintaining the valuable exclusivity such as patent protection of the IP; and
- who is the creator or inventor of the IP, or relevant parts of it⁵².

The written agreement should be comprehensive and contain all relevant terms and conditions of development of the asset, including IP ownership and the applicable terms and conditions in respect of commercialisation. The SA Auditor-General stresses the importance of detailed written agreements in his audit report on managing IP. He states:

*This is particularly so in the case of intellectual property because of its often amorphous nature. It is not physical tangible property which is easily described. Therefore, inherently there are likely to be uncertainties, and potential disputes.*⁵³

Any uncertainty or ambiguity increase the risks for government, not the least being costly legal disputation. The latter can also apply where proper due diligence and/or intellectual property risk management have simply not been undertaken. In the information age, cases of infringement of property rights can occur simply because information and materials are copied off the Internet and used for internal and external purposes.

*The Commonwealth should seek to be a model citizen in respecting IP rights of private individuals and organisations.*⁵⁴

A second significant risk in relation to commercialisation, particularly commercialisation of software, is the development being tied solely to its commercialisation. If this is the case, there is a risk that the pressure arising from commercial obligations may result in developments geared only to meet the commercial need as opposed to any other need of the government or agency.

Given the complexity of commercial arrangements, there is a risk that, even after considering all of the relevant issues and developing a very detailed written agreement, a lack of knowledge or appropriate expertise of staff within the agency would result in the arrangement not being properly monitored or enforced correctly.

Managing and minimising the risks

No two commercial arrangements will be the same. As a result, it is not possible to provide definitive guidelines on how to manage all of the risks involved. As part of a performance audit of joint commercial arrangements in 1996, my office conducted research which, coupled with discussions with experienced representatives of the public and private sectors, identified several items that should be considered in the development of all commercial arrangements. A brief guide⁵⁵ was developed identifying project planning and management issues that should be considered in order to minimise overall risk to the Commonwealth in any joint commercial arrangement. As well, it should be kept in mind that risks can also provide an opportunity which can easily be discounted by risk averse attitudes and behaviour.

The guide focuses on the complete life cycle of the venture beginning with a needs assessment. This is where the initial idea or proposal should be clearly defined and considerations should be given to the options available for pursuing a joint commercial arrangement.

Preliminary planning should then commence which may take the form of a more detailed study or feasibility analysis, including a financial analysis and risk assessment. The pros and cons of an arrangement should be evaluated to determine whether the agency should continue to develop the proposal.

Once it has been determined that the project should go ahead, the final planning and establishment phase can begin. It is during this phase that the terms of the contract should be

defined, the resources for the project should be located and assigned, and legal and financial obligations should be determined. It is prudent to seek appropriate legal advice on both the terms and obligations of any contract. Following this phase, all parties can sign the legally binding agreement. This should be undertaken prior to any resources being actually committed or expenses incurred.

The implementation phase can then begin. This is where the activity begins to turn the proposal into reality. It is very much a monitoring process, ensuring operations are working as intended, and adjustments are made to account for any unforeseen influences.

Depending on the nature of the arrangement and the duration the final stage involves project completion and evaluation. A review should be conducted to ensure that all legal and contractual obligations have been met. All ongoing requirements should be adequately addressed particularly in relation to maintenance requirements, licensing and royalty payments. There should be a formal acknowledgment by all parties of completion of the project. If the venture is ongoing, procedures should be put in place to ensure its viability. This is particularly relevant if responsibility of the project is handed over to new people, who may not have been involved from the start of the process.

ACCOUNTING FOR IP

As I commented in my introduction, we are now very much in the Information Age where intellectual property has become an important intangible asset. This is particularly so in organisations which do not invest heavily in traditional fixed assets, such as those in the service industry and many government agencies. In view of this, it is unfortunate that the accounting profession has yet to develop an appropriate framework to support the valuation and reporting of such assets within financial statements. In this regard, the Chief Executive at the Institute of Chartered Accountants in Australia has observed that:

...the accounting profession has not been strong enough in demanding that intellectual capital be properly measured and insisting that it is noted on the balance sheet, rather than remaining off balance sheet.⁵⁶

In this section of the paper, I will outline the current accounting principles in relation to IP both within Australia and internationally before moving to discuss some emerging developments within this area.

Current accounting requirements

There is currently no Australian accounting standard (AAS) that directly covers the measurement and recognition of intangible assets such as intellectual property. However, there are principles relating to intangible assets contained in a number of accounting standards.

Within the accounting standards, intangible assets are classified for accounting purposes as either identifiable or unidentifiable. Identifiable intangible assets are those that are capable of being both individually identified and specifically recorded in the books. This may be the case with intangible assets such as patents, licences and rights. Unidentifiable intangible assets have the converse meaning and would include items such as market penetration or

superior management which contribute to overall goodwill of a business. Where internally generated, unidentifiable intangibles are prohibited from recognition in financial statements.

AAS21 *Acquisitions of Assets* contains general requirements relating to the recognition of identifiable assets where there is an acquisition. However, as IP most often results from internal activity rather than acquisition, this standard is not often relevant.

AAS 13 *Accounting for Research and Development (R&D) Costs* provides the only other source of requirements of direct relevant to intangible assets such as IP. AAS13 requires that R&D costs be expensed as incurred, except to the extent that such costs are expected, beyond reasonable doubt to be recoverable through commercialisation or such like. In this case, the R&D costs may be capitalised and amortised over future reporting periods to match such costs with related benefits.

Aside from R&D costs captured under AAS13, an item regarded as an identifiable intangible asset may only be recognised in the financial statements when it meets the recognition criteria in SAC 4 *Definition and Recognition of the Elements of Financial Statements*. The latter requires it to be probable that future benefits embodied in the item will eventuate and the item possesses a cost or other value that can be reliably measured. The latter requirement regarding measurement poses difficulties for many intangibles, particularly internally generated intangibles, as they usually cannot be directly associated with particular transactions. This makes it difficult to reliably estimate the cost of development. As well, a market value may not be readily available.

While Australian accounting standards allow recognition of internally generated intangibles in certain circumstances, this is not the case under international standards. The Australian accounting profession is currently undertaking a harmonisation program with international standards in order to provide a consistent approach to accounting across the world.

If Australia were to harmonise with IAS 38 *Intangible Assets*, it would require a departure from the way we currently account for intangibles. Of note, IAS 38 specifically prohibits the recognition of internally generated brands, mastheads, publishing titles, customer lists and items similar in substance and also mandates that all expenditure on research must be recognised as an expense. Further, IAS 38 prescribes a rebuttable amortisation period of 20 years⁵⁷.

This is not the place to go into a detailed discussion on the technical accounting issues relating to intangible assets. I do, however, consider it is important to gain an appreciation of the complexities involved and recognise the diverse accounting treatments being applied internationally. The lack of overall homogeneity in the approach to intangibles is evidence that there is currently no generally accepted framework. This is not, however, an issue that is being ignored by the standard setting bodies.

The Australian Accounting Standards Board (AASB) has recognised the importance of these issues and has given the whole matter high priority in its work program. The AASB has developed a project to deal with the accounting for intangible assets, including goodwill. Given the complexities involved, the scope of the project will be progressed in two phases. Phase one, to be progressed in the short term, will focus on intangible assets (including goodwill) purchased as part of an entity or operation. Its scope is broadly consistent with the scope of the recent Standards issued in the United States.⁵⁸

Phase two is likely to be progressed on a longer-term basis and will deal with:

- the acquisition of an intangible assets which is not part of an entity or operation;
- accounting for goodwill arising from investments in associates;
- accounting for internally generated intangible assets;
- accounting for negative goodwill/discount on acquisition;
- presentation and disclosure; and
- public sector specific issues.

The project has commenced with the AASB considering an issues paper at its December meeting on the identification, recognition and initial measurement and subsequent accounting for intangible assets acquired as part of an entity or operation.

The International Accounting Standards Board (IASB) is also doing considerable work on the issue and has commenced a high priority project on business combinations including purchased intangibles. The project involves revising IAS 22 *Business Combinations* and may result in revisions to IAS 38 *Intangible Assets* and IAS 36 *Impairment of Assets* particularly in the longer term.⁵⁹ The controversy surrounding IAS 38, and the concern expressed by many⁶⁰ who do not consider that the requirements of the standard are appropriate for Australia, will ensure a healthy debate on this subject.

Related developments

As outlined above, both Australian and international accounting standards tend towards a position of non-recognition of intangibles as a rebuttable proposition. No doubt this position has been adopted as a result of the difficulty in determining a reliable measurement basis for such assets and perhaps even the contribution that inflated intangible asset values have made to corporate collapses over the years.

The problem with this approach, however, is that intangibles are becoming more important in terms of overall business valuation. Consequently, not to report them is to detract from the usefulness of financial statements. Two leading academics, James Guthrie and Richard Petty, have gone as far as saying:

Yet, in reality, the disparity between market values and reported asset values is now so great as to render useless, in decision making and valuation terms, the annual financial reports of an intangible-rich company.⁶¹

Given the failure of the traditional accounting model to address this issue in a satisfactory way, new models of accountability are being developed outside the accounting framework. As an illustration, Intellectual Capital Statements are forming part of annual reports in an effort to communicate the value of knowledge to an organisation. The form of these statements is not as precise measures but as 'collages' that explain knowledge management strategies and activities. Exponents, such as the Danish Ministry of Finance, suggest that such statements should be preferred in line with the specific features of each organisation, and there is no one-size-fits-all formula.

One such example of an Intellectual Capital Statement is the intangible asset monitor. The intangible asset monitor aims to value human and structural capital. It is divided into three categories:

- individual competence - people's capacity to act in certain ways;
- internal structure – consisting of a wide range of patents, administrative and information systems, concepts and models created by employees; and
- external structure – relationships with customers and suppliers.⁶²

CONCLUDING REMARKS

The Information Age will require all organisations, including the public sector, to take a new approach to managing and trading intangible intellectual property in a more contestable environment nationally and internationally. To be competitive, this will require organisations to develop information systems that are able to effectively capture and disseminate knowledge. The ability to use technology to transfer information and knowledge between people and across organisations offers considerable benefits. Instead of literally under-utilising resources, experts will be able to spend more time generating new knowledge in their area of expertise.

Both the Government and Opposition have emphasised the importance of innovation and the knowledge society. While knowledge, in one way or another, has always been at the core of wealth generation, most would agree that new information and communication technologies have provided an impetus for accelerated change which has increasingly been embedded in the growing importance of intangible inputs leading to generation of intangible capital.

Opportunities undoubtedly exist for the public sector to capitalise further on its intellectual wealth and exploit this in a commercial arrangement. As illustrated earlier, various options are available to agencies, particularly in forming suitable arrangements with the private sector for mutual advantage. These options focus on the importance of networks and partnerships and raise questions about appropriate governance arrangements which need to be addressed. From the public sector viewpoint, they require a better understanding of commercial relationships and imperatives, such as the 'time to market', reflecting the sometimes limited window of opportunity available for a product to be successful. On the private sector side, they require a better appreciation of the accountability and values imperatives of the public sector.

Such arrangements are expected to bring rewards but they may also bring risks. These risks need to be addressed and managed. One such risk is achieving the 'right' balance of commercialisation of IP, particularly in research organisations, as well as providing sufficient incentives to continue with basic research, perhaps much of which will not be able to be commercially exploited. On the other hand, as with any successful risk management, agencies have to be willing, and able, to take the opportunities often presented by risks. The latter may involve policy, as well as administrative, decisions.

It is recognised that public sector agencies seeking to capitalise on their intellectual property must do so within the APS legal and financial framework. The Commonwealth's Information Technology IP Guidelines provide a succinct statement on the issue:

The Government's objective is to maximise the net national benefits from the development and ownership of IP as it requires. Careful consideration should be given on a case by case basis to the interests of all prospective beneficiaries including Australian industry, the commonwealth agency or agencies concerned and the taxpayer as reflected by the impact on consolidated revenue.⁶³

Unfortunately I am not able to provide you with a manual or template on how best to manage your IP. This would also make accounting and auditing IP a much easier task. However, as with all business operations, strong and committed leadership from the top is essential for success, coupled with sound strategy and ownership throughout the organisation. The sheer scope, volume and diversity of intellectual property in the Commonwealth is quite daunting. Nevertheless, raising awareness of intellectual property issues is a necessary first step for public sector managers in determining how best to manage our IP assets for better results. The current expectation is that such managers are accountable for achieving those results. That is our on-going challenge.

NOTES AND REFERENCES

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Intellectual Property includes all copyright (including rights in relation to phonograms and broadcasts), all rights in relation to inventions (including patent rights), plant varieties, registered and unregistered trademarks (including service marks), registered designs, circuit layouts, and all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields.
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- ²⁵ New South Wales Auditor-General's Performance Report, 2001, *Management of Intellectual Property*, Sydney October 2001.
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- ⁵⁶ Harrison, Stephen 2001. *Managing Intellectual Capital*. CFO Vol 6 Issue No 6. July. p.70.
- ⁵⁷ In rare cases, there may be persuasive evidence that the useful life of an intangible asset will exceed 20 years. In these cases, an enterprise should amortise the intangible asset over the best estimate of useful life and disclose the reasons that the presumption of the useful life of an intangible asset not exceeding 20 years is rebutted and the factor(s) that played a significant role in determining the useful life. IAS 38 does not permit an enterprise to assign an infinite useful life to an intangible asset.
- ⁵⁸ Refer Statement of Financial Accounting Standards SFAS 141 *Business Combinations* and SFAS 142 *Goodwill and Other Intangible Assets*.
- ⁵⁹ Refer to IASB web site at www.iasc.org.uk for Business Combinations Project Summary.
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