

Compliance with the National Principles of the Intellectual Property Regime by Australian Universities

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Abstract: Australia's public universities are free to establish their own individual intellectual property policies subject to adherence to a set of National Principles of Intellectual Property Management for Publicly Funded Research if they are to comply with the requirements of government research funding agencies. This analysis concludes that, within the four walls of their intellectual property policies, Australia's state universities presently do not fully comply with this regime. This gives rise to potential implications for continuing research funding and compliance with contractual obligations arising from current research funding.

1. Introduction

The Australian Government spent approximately \$3.4 billion per year in research through Australian universities in 2002-2003, the latest figures available (ABS, 2005; Table 25.1). Australia is placed in the middle rank of nations in terms of total R&D expenditure and at the higher end of government R&D expenditure (ABS, 2005; Table 25.3). According to the Australian Prime Minister, expenditure in research made and planned by the Government: "...marks a significant step in harnessing the collective talent, energy and resources of all those dedicated to securing Australia's economic future, both within and outside Government. It represents a commitment to pursue excellence in research, science and technology, to build an even more highly skilled workforce and increase opportunities for the commercialisation of new ideas..." (Australian Government, 2001; p.3). Similar sentiments justifying expenditure in research can be found in the statements and policy of the governments of other advanced economies such as the UK (DTI, 2000) and Canada (Canada, 2001).

Similar to most common law jurisdictions, with the notable exception of the US where the *Bayh-Dole Act* prescribes ownership of intellectual property arising from federally-funded research, Australian universities are generally free to develop and adopt such intellectual property policies and procedures as appear to them to suit their circumstances from time to time. The principal exception to this rule is one of practice rather than law: federal funding for university research under the Australian Research Council, the National Health and Medical Research Council and some other bodies, is usually contingent upon universities complying with a particular set of National Principles of Intellectual Property Management for Publicly Funded Research published by the Australian Research Council, National Health and Medical Research Council, and others (ARC et. al., 2001) (the "National Principles").

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This paper surveys, analyses and summarises the intellectual property policies implemented by thirty-six of Australia's public universities² (in this paper referred to as the "state universities"). It first describes the methodology used in this research (section 2), then outlines the need for a coherent intellectual property regime under which universities should operate (Section 3). It then undertakes a discourse and analysis of the National Principles (section 4), identifies which of the National Principles come within the ambit of university intellectual property policies and assesses the conformance of the intellectual property policies of the state universities with the National Principles (section 5) and draws conclusions (section 6).

2. Methodology

Analysis of the conformance of the state universities with the National Principles is done using a formal content analysis.

The first step in this process involves developing the coding units to be used in the analysis. Each of the tenets derived from the National Principles shown in Table 1 constitutes a coding unit.

The second step involves identifying and compiling every intellectual property-related policy published on the world-wide-web by each of the state universities. Every intellectual property policy located, however described by each university, was copied and assembled for analysis. No clarification, expansion or explanation was sought from any university in respect of any policy – the documented policies published on the world-wide-web were taken at face value as representing the complete statement by each university of its intellectual property policy. In fact, this appears to be a reasonable assumption, because in no case did it appear that this approach would result in any misrepresentation or distortion of the policy of any university subject to one important *caveat*. In the body of their intellectual property policies numerous universities made reference to other of their policies, importing relevant sections of these other policies by reference. Some universities have policies other than their intellectual property policies that address issues covered in the National Principles, but have not referred to these policies nor imported them into their intellectual property policies by appropriate reference. Nonetheless, these other policies may cover some tenets of the National Principles, so that individual universities may address tenets that otherwise appear not to be covered in their intellectual property policy according to this analysis.

The next step involves reading and extracting every mention of each coding unit as it occurred in every state university's intellectual property policy. The final step is to assess, one tenet at a time, whether each university's intellectual property policy either: addresses that tenet, addresses it in part, or does not address it in any meaningful way. This then permits an estimate of

² For a list of universities, see: <http://www.avcc.edu.au/content.asp?page=/universities/memberUnis.htm> This study excludes the following universities: Bond University, Australian Catholic University and Notre Dame University.

the number of universities that have addressed the tenet in some way or not at all.

The results of this survey are correct as at 17 July 2006. University intellectual property policies tend not to be static and are reviewed and amended from time to time; at the time of this research several universities claimed that their policy was under review (indeed, some appear to have been under review, without amendment, for some years).

Further, it is possible that university intellectual property policies may be adapted in practice to meet particular requirements including adherence to the National Principles. If this is done, and there can be no certainty whether it is or not without further research, it could lead to varying results: unfairness; uncertainty; added complexity of management; potential problems with commercial partners, and give rise to difficulty in auditing compliance with the National Principles.

3. The Need for Compliance with Coherent Principles

The United States Congress enacted the *Bayh-Dole Act*³ in 1980 in order to give perfect title in intellectual property arising from federally-funded research to the universities in which it is created. This Act grants, in the United States, certainty of title in intellectual property and the right of the university to exploit it. The Act was stimulated by the belief that the institution best placed to exploit intellectual property is the one closest to its creation: the university⁴. In contrast to the United States' position, other advanced common law jurisdictions⁵ have elected not to intervene with specific legislation, preferring to allow the general law to apply to matters of ownership of intellectual property developed within universities. In the case of Canada, especially, this issue has been examined at length and the Canadian position of having no specific legislative intervention is viewed variously as acceptable subject to individual university guiding principles (Conference Board 1999; pp.16-20) or a weakness (Reimers 1999; pp.3-6) depending on the point of view of the author. The UK position is similar to that of Australia where the general law applies and universities develop individual policies as they see suit their particular needs (Lambert, 2003; pp. 50-51) subject to a recommended strategic approach to the management of university intellectual property (Auril, et. al., 2002).

In Australia, the Australian Parliament has constitutional power to make laws relating to most intellectual property⁶ with the exception of confidentiality and trade secrets, neither of which deals with registrable interests, and which are covered in various State and Territory laws. As a result of its constitutional power, the Australian Parliament has made laws covering the field in patents,

³ Pub. L. 96-517, §6(a), Dec. 12, 1980, 94 Stat. 3018 (35 U.S.C. 200 et seq.)

Also known as the University and Small Business Patent Procedure Act of 1980

⁴ On the effect of the Bayh-Dole Act, see, for example: Mowery, et. al. (2001)

⁵ For this purpose: the United Kingdom, Canada, Australia and New Zealand

⁶ Australian Constitution, sect 51(xviii)

copyright, trade marks, designs, plant varieties and circuit layouts⁷. In terms of rights to own and exploit intellectual property developed in universities, this is covered by the general law. For example, in the absence of an agreement to the contrary, a university will generally own the intellectual property arising from the work of an academic staff member who has developed the intellectual property in the usual course of an employment relationship or where the staff member has developed the intellectual property using university resources, funding or facilities. A student, on the other hand, who is not in an employment or contractual relationship with the university, will normally own the intellectual property developed from that segment of the research in which the student is involved. Similarly, a visitor to the university who is not in an employment or contractual relationship with a university would normally own such intellectual property as the visitor develops. The law permits, however, ownership and certain other rights in intellectual property in each case to be altered from the usual terms by specific agreement. It is evident that, in the absence of some consistent policy amongst the universities, this arrangement has the potential to result in a confusing array of potential intellectual property ownership rights and entitlements, particularly where several parties such as collaborating universities and other research institutions are involved.

In the absence of certainty about who owns and may deal with intellectual property, venture capitalists are reluctant to deal with universities and their associated companies, potential licensees could not be sure that they may use intellectual property for fear of infringing someone's undisclosed rights, and there would be uncertainty amongst the owners and developers as to who is entitled to what return from the intellectual property being exploited.

As a result of this environment there have been attempts in Australia to bring coherence to the situation through the development of national principles and practices arising from policy processes developed by representative organs which have culminated in the present National Principles, and the *Ownership of Intellectual Property in Universities Policy and Good Practice Guide, the "Good Practice Guide"*, published by the Australian Vice-Chancellors' Committee (AVCC, 2002).

It is important for universities to comply with the National Principles because both major Australian research funding agencies: the National Health and Medical Research Council, and the Australian Research Council require compliance with the National Principles under the terms of their funding agreements. A typical Australian Research Council agreement provides as follows: "Except with written approval from the ARC, all Proposals and ARC-funded research projects must comply with the *National Principles of Intellectual Property Management for Publicly Funded Research* ... and accord with any intellectual property policies of the researchers' organisations"⁸. A

⁷ *Patents Act 1990; Copyright Act 1968; Trade Marks Act 1995; Designs Act 2003; Plant Breeder's Rights Act 1994; Circuit Layouts Act 1989*

⁸ Australian Research Council Linkage Projects Funding Rules for Funding Commencing in 2007, clause 11.4.4

failure to comply as required could risk rendering universities ineligible for funding or place them in breach of their agreement with the funding agencies.

Generally within the terms of these national statements of principles and good practice, Australian universities have developed individual policies and procedures dealing with intellectual property. A review of these individual policies and procedures reveals that universities have diverse intellectual property policies which generally fail to implement the national overlay, with some regimes being almost idiosyncratic. Universities have variously expressed their intellectual property policies as university statutes, regulations, rules or policies, although whether anything turns on the different form of expression is an open question and not examined here as this paper does not examine the respective enforceability of each university's intellectual property policies. Some policies may be readily enforced because they are enacted as university legislation, but the others may be equally enforceable by virtue of them being incorporated into relevant contracts such as contracts of employment.

The issue examined in this paper is: do the state universities' intellectual property policies comply with the National Principles?

This question is examined in aggregate (individual universities are not identified), by identifying the tenets described by the National Principles and then examining if and how each of the state universities comply with the National Principles as expressed through these tenets. Whether the universities comply with the National Principles is examined only through their expression in each university's individual intellectual property policies. While certain principles could be met through other policies of a university (for example, conflicts of interest in research could be dealt with under a generic policy), it is felt that it is valid to examine only each university's intellectual property policy to locate how each principle (and tenet) is handled for four reasons. First, most universities either cover a tenet or refer to another policy within their intellectual property policy, so it is legitimate to expect that each university should, at least, make reference within its intellectual property policy to other policies that may apply. Second, it is reasonable to expect that staff, students and visitors will be able to refer to one document in order to discover all issues relevant to intellectual property without requiring them to refer to a panoply of policies (unless they are referenced in the intellectual property policy) in order to understand their respective rights and obligations. Third, any business looking at dealing with a university should be entitled to refer to that university's intellectual property policy and expect that it will cover the field on that university's policy. Fourth, because the major funding agencies rely on universities adhering to the National Principles, it is reasonable to expect that each university will publish a succinct expression of its implementation of the principles to demonstrate clear and unequivocal adherence to them. For reasons of practical research, this paper assumes that the intellectual property policies of each university represent the total expression of their policy in this regard. Nonetheless, however good the reasons may be for one coherent intellectual property policy, it is quite likely

that many universities rely on policies other than their intellectual property policy to satisfy the sum of the requirements under the National Principles.

4. The National Principles

The National Principles apply to publicly-funded research, which means that it applies to universities to the extent that universities receive public funding for research. While the Principles also apply to other entities such as national research entities, this paper undertakes analysis only as it concerns universities.

There are nine principles contained within the National Principles. The Principles variously specify that an institution have in place: *policies* (seven instances); *procedures* (six instances); and one instance each of *agreements in place*, of providing *assistance to researchers*, and being *in a position to report*. Some Principles specify several obligations, hence there are more references to policies, procedures and the like than there are Principles. It is a reasonable assumption that the form of expression used in the Principles (whether policies, procedures or otherwise) carries nothing other than an ordinary meaning intended to recommend some action on the part of the university or publicly-funded research organisation.

Some of the Principles contain several tenets. Where a principle contains several tenets, in this paper they are referred to as, for example, principle 3A (being the first tenet of principle 3), 3B (the second tenet of principle 3) and so on. Each of the principles is set out below in order to identify those obligations imposed by the National Principles that should be incorporated into individual university intellectual property policy.

Principle 1

Research institutions will have policies approved by their Governing Body relating to the ownership, protection and exploitation of IP.

This principle is required to ensure the enforceability of the intellectual property policies of the universities. It is assumed for the purpose of this analysis that universities have duly enacted their relevant policy and enforceability is not examined.

Principle 2

Research institutions will have procedures that provide support to publicly funded researchers so that they can recognise when their discoveries may have potential commercial value and provide for a review process to identify IP that can be protected and/or exploited.

This principle has two tenets which, for university purposes, may be described as: (principle 2A) the obligation to train staff, students and visitors in intellectual property commercialisation matters; and (principle 2B) the obligation to have a process to identify potentially commercially valuable

intellectual property, both of which should be covered in intellectual property policy.

Principle 3

Research institutions will have policies that make clear to staff their responsibilities in relation to IP protection including, where appropriate the maintenance of research laboratory records and the prevention of premature public disclosure of research results prior to obtaining IP protection.

Institutions should provide, wherever possible, assistance to researchers in fulfilling these obligations and responsibilities as well as rewarding and encouraging their participation in any subsequent commercialisation process.

For this analysis, this principle has two tenets: (principle 3A) which deals with certain research practices and the need to maintain confidentiality about intellectual property; and (principle 3B) which covers the need to assist researchers discharge their obligations and universities to reward commercialisation success.

As to principle 3A, laboratory practice is properly covered in research policy, while intellectual property policy should cover confidentiality; and both aspects of principle 3B should be covered in the intellectual property policy.

Principle 4

Public funding agencies should have a clear policy on whether they will claim any ownership and/or associated rights for IP generated from their supported research. Recognising the Common Law rights of research institutions as employers, the ownership and the associated rights of all IP generated by the NHMRC and the ARC supported research will initially be vested in the research institutions administering the grants.

Research institutions will have policies and relevant procedures in place for determining the subsequent ownership and/or assignment of IP rights, and will have clear agreements with employees and grant holders registered through the research institutions on ownership and/or associated rights of IP.

Research institutions will also have clear policies and agreements in place regarding students including postgraduate students, who are not covered under the Common Law in this context, on ownership of IP generated during their course of study, research and training.

Particular attention should be given to cases where IP impinges or potentially impinges on the cultural, spiritual or other aspects of indigenous peoples.

Principle 4A, dealing with the ownership of intellectual property vis-à-vis funding agencies and universities, normally would not be covered in a university's intellectual property policy.

The following matters contained in this principle should be covered in a university's intellectual property policy: (principle 4B) dealing with the subsequent ownership of intellectual property developed by staff and grant

holders; (principle 4C) dealing with ownership of intellectual property developed by students; and (principle 4D) dealing with indigenous issues.

Principle 5

Institutions will have procedures in place to guide researchers in assessing the existing IP in the field that is likely to affect their research in order to determine their freedom to operate in that field of research.

This principle is likely to be covered in research policy or dealt with at an administrative level rather than being covered in intellectual property policy.

Principle 6

Research institutions will have procedures for the regular review of IP and associated commercial activities and outcomes arising from publicly funded research.

Research institutions will have procedures in place to provide advice to the creators of the IP on the options that are available for commercialising IP.

Both the regular review of policy (principle 6A) and procedures to advise creators of intellectual property on commercialisation options (principle 6B) should be covered in intellectual property policy.

Principle 7

Research institutions will have policies that recognise the rights and needs of all stakeholders involved in the research supported by public funds.

These policies will define the way in which benefits from the development and exploitation of the IP will be allocated.

The generic obligation to have policies that recognise the rights and needs of all stakeholders (principle 7A) and how benefits from commercialisation will be shared (principle 7B) should be covered in intellectual property policy. It is not clear how principles 7A and 7B differ in practice, nor how principle 7B differs significantly from principle 3B insofar as it deals with rewarding commercialisation success.

Principle 8

In order for funding agencies to fulfil their reporting requirements to the government on the outcomes of the funded research, research institutions must be in a position to report annually on IP management of their publicly funded research.

This principle should be dealt with in the intellectual property policy because it deals with intellectual property management. It is interesting to note that institutions are required to be *in a position to report*, whether or not they are actually obliged to report.

Principle 9

Research institutions will have policies and procedures that provide guidance in relation to potential conflicts of interest concerning ownership, management, protection and exploitation of IP.

This principle should be dealt with in the intellectual property policy because it deals with an important issue affecting intellectual property.

In summary, Table 1 shows the tenets mentioned in the National Principles that should be covered in each university's intellectual property policy and the source of the tenet within the National Principles:

Tenet No.	Tenet	Principle(s)
1	Training staff and students on commercialisation matters	2A, 3B
2	Identifying potentially valuable intellectual property	2B, 3B
3	Maintaining confidentiality	3A
4	Ownership of intellectual property	4B, 4C
5	Proper handling of indigenous issues	4D
6	Regular review of intellectual property policy	6A
7	Advising creators about commercialisation options	6B
8	Rewarding commercialisation success	3B, 7B
9	Regular reporting of results	8
10	Handling conflicts of interest	9

Table 1 – Matters that should be covered in university intellectual property policies

5. Compliance with the National Principles

Of the thirty-six Australian universities that receive public funding for research examined in this analysis, only five make an explicit statement in their intellectual property policies that they comply with the National Principles. Even then, there are areas where all are non-compliant in some way. Fourteen universities are arguably unlikely to comply with the National Principles because they have intellectual property policies that pre-date the National Principles and have not been modified since their publication. Another thirteen universities have intellectual property policies that post-date publication of the National Principles and, presumably, were framed with knowledge of them, although, within the four walls of their intellectual property policy, none of them appear to comply in full with every one of the stated principles. The remaining nine universities have intellectual property policies that are either dated around 2001 (the year when the National Principles were published) and therefore may have been drafted with the Principles in mind,

or have been modified (although not necessarily for the purpose of conformance with the Principles) after publication of the Principles.

Of the Group of 8 research universities, only three have intellectual property policies that post-date the National Principles (and another two have amendments to their policies that post-date the Principles), leaving three that are unlikely to qualify as being compliant with the National Principles. On the same test, four of the five Australian Technology Network universities have intellectual property policies that post-date the Principles, and only one that pre-dates.

As noted above, universities are regularly required to state in research funding contracts that they comply with the National Principles; but it would appear that many, possibly most, have intellectual property policies that fail to comply, placing those universities in a vulnerable position as to funding and compliance with their contractual undertakings.

Taking account of the nine principles in the National Principles, no state university appears to comply with every principle within their intellectual property policies, although some have only relatively minor omissions or variants. One important matter not covered by the National Principles is how disputes as to intellectual property ownership should be handled. This is covered in the Good Practice Guide (AVCC, 2002; p. 41) and most universities (see below) set out a dispute resolution process in their intellectual property policies.

Each of the ten tenets relevant to university intellectual property policies (plus the issue of dispute resolution mentioned in the Good Practice Guide) is analysed below. The table under each tenet shows the number of universities (out of thirty-six) that, in respect of that issue have either:

- covered the issue in their intellectual property policy;
- covered the issue, in some fashion or with qualifications, in their intellectual property policy; or
- not covered the issue in their intellectual property policy

Tenet 1 - Training staff and students on commercialisation matters

Whether covered	Number of universities
Issue covered	12
Issue covered in part	1
Issue not covered	23

It is essential that a researcher, in the first instance, must be able to identify discoveries, inventions and other creations that may have value. Few people possess the innate ability to identify the commercially valuable creation – most need some level of instruction; certainly most will need instruction on so much of the law relating to intellectual property as is relevant. This requires a continuing program of educating research staff and others associated in the commercialisation process to train and familiarise them with the many issues

that must be covered in identifying, protecting and exploiting intellectual property. Of the thirty-six state universities in Australia, only twelve set out in their intellectual property policies such an obligation to educate researchers and other stakeholders; and not one of the Group of 8 nor the Australian Technology Network universities has set out such an obligation in their policies. One university undertakes to: "... take reasonable steps to disseminate and explain this policy to staff and to students who may be affected by it", which is not quite a comprehensive obligation to train, but may alert some stakeholders to the issue.

Many universities carry out this training function in fact, but do so most likely because it is prudent or because of obligations arising under other policies or arrangements.

Tenet 2 - Identifying potentially valuable intellectual property

Whether covered	Number of universities
Issue covered	30
Issue covered in part	2
Issue not covered	4

Before exploitation of intellectual property can occur it is usually necessary that disclosure be made of the invention, discovery or creation to the relevant authority in the university. The National Principles anticipate disclosure through Principle 6, which states: "*Research institutions will have procedures for the regular review of IP and associated commercial activities and outcomes arising from publicly funded research. Research institutions will have procedures in place to provide advice to the creators of the IP on the options that are available for commercialising IP*". Neither of these things could be done without a relevant disclosure by a researcher who has potentially valuable intellectual property. The obligation on academic staff to disclose discoveries, inventions and creations may exist through necessary implication under the contract of employment, or it may be a specific term in individual employment contracts. But in the absence of some obligation, researchers may elect not to disclose their findings. Certainly, in the case of students and visitors, it is probable that the obligation to disclose is to be found either in a university intellectual property policy or specific contracts with individuals. At the very least, having an obligation to make disclosure within a university's intellectual property policy is a safety net for the university if the obligation does not arise in some other way. Of Australia's thirty-six state universities, twenty-five impose a positive obligation on the creator to make disclosure to the university, while five say that the creator "should" make disclosure to the university, with two requiring disclosure only in the event that the creator wishes to exploit the creation. Only four universities impose no specific obligation to advise the university about a creation with commercial potential.

The final step at this stage requires the university to make an election of whether it will undertake protection and exploitation of the potentially valuable intellectual property. Once a creation (other than copyright in teaching

materials) has been disclosed to the university, the university has, first, to make an election on whether it will deal with the intellectual property at all. It is reasonable to expect that the university will make this decision within a specified or, at least, reasonable time and, in the event that it elects not to deal with the intellectual property, to permit it to revert to the creator to use as the creator sees fit. To do otherwise would be unfair and condemn potentially valuable intellectual property to a limbo where no-one may exploit it. Of the thirty-six Australian state universities, nine do not specify a period after disclosure within which they must decide whether or not to exploit the intellectual property, three specify that it must be done in a “reasonable time” or a similar formulation, seven allow up to two months to make the election, eight universities allow more than two and up to three months and six allow more than three and up to six months. One university allows itself up to eighteen months to make the election. One university is silent on the matter because it allows the creator to own the intellectual property in any event, and a decision by the university to exploit it is irrelevant. Some universities allow themselves to extend the period by which they have to make an election. These figures show a considerable spread of times, which might make for some interesting negotiations when universities collaborate amongst themselves in the absence of specific agreements with every party including researchers.

Tenet 3 - Maintaining confidentiality

Whether covered	Number of universities
Issue covered	27
Issue covered in part	2
Issue not covered	7

Premature disclosure of details about potentially valuable intellectual property can, in many cases, compromise the ability to commercially exploit a creation. Patents, in particular, can become non-registrable if details have been published prior to an application for registration. Trade secrets are hardly secrets if they have been disclosed to people who are not under an obligation to maintain confidentiality. The most usual place to find policies dealing with confidentiality of intellectual property is in a university’s intellectual property policy. In fact, confidentiality of intellectual property with commercial potential is set out as an obligation or is sufficiently clearly implied, in twenty-seven of the thirty-six state universities. Seven universities do not mention any obligation to maintain confidentiality over intellectual property, while another two appear hesitant about making any demands, content to say, in one case: “parties should understand that non-confidential disclosure of patent or design subject matter prior to registration may prevent registration” and, in the other: “staff members and students should be conscious of the need to avoid premature disclosure of research results to third parties prior to completing a Notification and consideration of the need to obtain intellectual property protection” which, while a useful reminder, would not, in itself, create a binding obligation of confidentiality. There is an arguable case that academic staff are under an obligation, as employees, to maintain confidentiality, but this may not extend to students and visitors in the absence of a separate contractual

obligation, in which case a policy setting out the obligation in somewhat stronger terms may be advisable.

Tenet 4 - Ownership of intellectual property

Whether covered	Number of universities
Issue covered	36
Issue covered in part	nil
Issue not covered	nil

There must be a high degree of certainty as to the owner of title in intellectual property developed in universities if industry or venture capital is to be enticed to participate in commercial development. The advantage of the *Bayh-Dole Act* in the USA is that, at least as it concerns federally-funded research, ownership of title is assured by legislation. In Australia, this certainty of title has to be achieved by the operation of the general law, the application of university policies and similar instruments, and the terms of particular contracts as they apply between various institutions (such as the host university, collaborating institutions, and funding agencies, to name the most obvious) and the individual researchers involved. This arrangement appears complex, and provides ample scope for legal and administrative error. It would not be aided by the diversity apparent amongst university policies.

In relation to ownership of intellectual property, the intellectual property policies of the thirty-six Australian state universities were analysed as follows: they were segmented into four categories: Intellectual property developed by employees of the university (other than teaching materials); intellectual property in teaching materials developed by university employees; intellectual property developed by students; and intellectual property developed by visitors to the university. The analysis shows an interesting diversity of approaches to ownership of intellectual property amongst universities within each category.

Dealing first with intellectual property (other than teaching materials) created by employees of the university: thirty-four universities asserted ownership of such intellectual property, while two permitted the staff to own it. In the two cases where the staff had the rights to the intellectual property, one exempted commissioned works and computer programs, while the second claimed a licence in such intellectual property for teaching and research purposes, and all rights in any intellectual property if prepared under a specific agreement which permitted this. Eighteen universities specifically granted copyright in scholarly works to the creator as an exception to the general rule.

Rights in teaching material showed greater diversity of treatment. In this case, twenty-three universities claimed copyright⁹ in teaching materials, but thirteen waived their copyright in teaching materials. Of those universities that waived their entitlement to copyright, only one did not then claim a licence on the

⁹ Sometimes a more ambit claim was made in the policy, but copyright, the most important right in this regard, was always within the scope of the university's claim.

work for teaching and research, or similar, purposes. Thirteen universities explicitly grant the creators of teaching material a licence to use the works, most usually limiting its use under the licence to teaching and research purposes.

According to the general law, students will own intellectual property they develop because they are not in an employment relationship with the university and the relevant legislation does not cover students. To the extent that a student has an employment relationship with the university, for example as a part-time tutor, intellectual property created by that student will fall within the rules applicable to university staff. Universities generally leave the intellectual property rights of students, in their capacity as students, with the student. Thirty-two state universities permit students to own the intellectual property they develop, albeit subject to a number of limitations. It is quite common, but not universal, that intellectual property arising from research that is commissioned, sponsored, or otherwise funded, or which uses significant university resources or, in some cases, university supervision, will be the property of the university. In at least thirteen universities policy requires that students are either obliged or encouraged to enter into research participation agreements, the terms of which will prevail over policy, and will normally repose intellectual property ownership in the university.

The area where there is greatest uncertainty as to ownership of intellectual property involves university visitors – typically the likes of honorary or visiting researchers, fellows and professors, who may well bring particularly valuable knowledge and skill to bear upon research. Twelve universities make no mention of ownership of intellectual property arising from the participation of visitors. Interestingly, none of these twelve universities is from the Group of 8 research universities. Eleven universities specify that a visitor is either dealt with on a case-by-case basis or must sign an agreement prior to participation in research. Eleven universities assert their ownership of intellectual property created by visitors, while four concede ownership of intellectual property to the visitor. One university that concedes ownership of intellectual property to the visitor also requires the visitor to sign an agreement which, presumably, could have the effect of granting intellectual property rights to the university in any event. The numbers of universities mentioned here exceeds thirty-six because two universities require that a visitor sign an agreement but still specify who will own the intellectual property.

Principle 4B deals with: “...*the subsequent ownership and/or assignment of IP rights...*”. Twenty-seven of the thirty-six state universities permit the intellectual property to revert to the creator (or they otherwise waive their rights) in the event that the university decides not to exploit the intellectual property or, having made an election to exploit, then fails to take relevant steps to do so. In the event that the intellectual property reverts to the creator, three of these universities claim a licence in the intellectual property, while another six variously claim a share of the costs they have incurred and a share of commercial benefit arising from later exploitation. None of these terms appear unreasonable in themselves but, again, their diversity may impose some uncertainty in negotiations with external parties.

This analysis discloses a diversity of approaches amongst Australia state universities as to the ownership of intellectual property and the way it is effected. This diversity has the benefit of allowing universities to tailor the environment to meet their specific needs, but it contains the seeds of risk that the complexity creates uncertainty and makes title in intellectual property difficult to guarantee to the level that may be required by potential industrial partners and financiers.

Tenet 5 - Proper handling of indigenous issues

Whether covered	Number of universities
Issue covered	6
Issue covered in part	3
Issue not covered	27

Very few Australian state universities in their intellectual property policies cover the principle that requires special consideration to be given to indigenous issues. Only one of the Group of 8 research universities mentions the issue in its intellectual property policy. Of the three universities that cover the matter in part, none provides any substantive policy: one mentions that it should be considered; one refers to its related policy on indigenous matters; and one is content simply to define what constitutes indigenous works within the definitions section of its policies. It would appear that this principle is not accorded a high priority by universities within their intellectual property policy.

Tenet 6 - Regular review of intellectual property policy

Whether covered	Number of universities
Issue covered	23
Issue covered in part	nil
Issue not covered	13

Clearly it is important to review intellectual property policies to take account of changes to the environment both internal and external to the university such as changes in the law, taxation or the university’s commercial needs. Of the thirty-six state universities, twenty-three have addressed the need for review of intellectual property policies. Of this twenty-three, fifteen provide either an interval between review dates or a date by which review should be done (although three of them have missed the date specified), while eight universities specify neither a date for review nor an interval. Those in this last category usually have a simple formula like: “the intellectual property committee shall periodically review the policy”. Thirteen universities do not mention within their intellectual property policy any requirement to review the policy, although some clearly do undertake reviews, either as a matter of practicality or, possibly, under other general university requirements to review policies periodically.

Tenet 7 - Advising creators about commercialisation options

Whether covered	Number of universities
Issue covered	27
Issue covered in part	nil
Issue not covered	9

This issue is covered, to some extent, by the need to educate staff, students and visitors on commercialisation matters (tenet 1), however, this issue is taken to be fulfilled if universities have options permitting dealing in intellectual property by creators in the event that the university may have a right to exploit but chooses not to do so. The most usual policy involves allowing the intellectual property to revert to the creator, and this is taken as the proxy, in the case of universities, as to when this issue is satisfied.

Twenty-seven of the thirty-six state universities permit intellectual property to revert to the creator (or they otherwise waive their rights) in the event that the university decides not to exploit the intellectual property or, having made an election to exploit, then fail to take relevant steps to do so. In the event that the intellectual property reverts to the creator, three of these universities claim a licence in the intellectual property, while another six variously claim a share of the costs they have incurred and a share of commercial benefit arising from later exploitation. None of these terms appears unreasonable in themselves but their diversity may impose some degree of uncertainty in negotiations with external parties.

Tenet 8 - Rewarding commercialisation success

Whether covered	Number of universities
Issue covered	32
Issue covered in part	4
Issue not covered	Nil

Every university except four sets out an explicit basis for sharing the commercial benefit derived from the commercialisation of intellectual property. Two of these exceptions refer in their intellectual property policy to guidelines issued by the university but otherwise contain no detail, while two are content to give no more specific undertaking than an assurance that benefits arising from the development and commercialisation of patents and related rights will be shared with the creator. Indeed, in every case, universities propose to share benefits with the creator of the intellectual property. Twenty-six of the universities specify that, with some minor exceptions, benefits will be calculated after costs associated with protecting and commercialising the intellectual property.

The most generous outcome for creators granted by one university is 95% of net benefit up to \$1million and 85% of net benefit above \$1million. The most typical distribution of benefits is one-third to the creator, one-third to the creator's faculty, and one-third to the university; with benefits to the creator generally ranging between 30% and 50% of net commercial benefit, while some range up to between 60% and 66%. Seven universities apply a

threshold, typically in the range \$5,000 to \$20,000, below which the creator is entitled to the whole sum, after which the commercial benefits are split amongst the stakeholders.

Tenet 9 - Regular reporting of results

Whether covered	Number of universities
Issue covered	5
Issue covered in part	nil
Issue not covered	31

Only five universities mention the need to report on results of commercialisation and intellectual property activity on a regular basis. The balance of thirty-one universities do not mention reporting requirements in their intellectual property policies. It is quite possible that universities report results regularly as a matter of commercial prudence or in line with other university policies in publications such as annual reports. However, in the absence of a requirement stated in the intellectual property policy, it can not be assured that a university is in the position to report annually nor that any reports produced deal sufficiently with intellectual property management.

Tenet 10 - Handling conflicts of interest

Whether covered	Number of universities
Issue covered	8
Issue covered in part	6
Issue not covered	22

Conflicts of interest in the commercialisation of research have the potential to cause substantial difficulties if not handled appropriately. Yet only eight of thirty-six universities aver to a process within their intellectual property policies to handle conflicts of interest. Of the six universities in the part-covered category, two universities note that their conflict of interest policy is related to their intellectual property policy, two make a mere mention of conflict of interest within their policies, and two others mention it only in respect of spin-off companies. Twenty-two universities make no reference to the handling of conflicts of interest within their intellectual property policies. It may be that many or most of those universities that are silent on this issue in their intellectual property policy assume that, where they exist, the university's generic conflict of interest policy will apply in any event. However, given that this issue is one of only nine principles enunciated in the National Principles, there is evident inconsistency if most issues arising from the principles are addressed in intellectual property policies while one is largely ignored.

Good Practice - Dispute Resolution

Whether covered	Number of universities
Issue covered	32
Issue covered in part	1
Issue not covered	3

Although covered in the Good Practice Guide rather than the National Principles, clearly a great majority of universities see a dispute resolution procedure as an important part of their intellectual property policy. While a few universities have a quite elementary system in which disputes are referred to the Vice-Chancellor who, for example, “may decide to refer to a committee to assist the resolution of a dispute”, most have more elaborate processes, including some that refer to generic university grievance processes. One university has a dispute resolution procedure dealing with disputes over copyright in teaching materials only.

6. Conclusions

This review of the adherence of Australia’s state universities demonstrates a diversity of compliance. Indeed, analysing the rights and obligations set out in the universities’ intellectual property policies demonstrates that none of Australia’s state universities appears to comply with every one of the nine National Principles within the four walls of its intellectual property policy. In one sense, this is not surprising given, among other factors, that half or more of the universities have intellectual property policies that pre-date the introduction of the National Principles. What is surprising is the number of universities with intellectual property policies that post-date the National Principles that still appear to fail to meet so many of the principles. It is quite likely that many of the requirements set out in the National Principles are met, in fact, by universities under other policies or as a matter of commercial prudence. This likelihood is reinforced by the fact that, in many instances, universities aver in their intellectual property policies to related policies which are likely to satisfy some of the requirements under the National Principles. Nonetheless, even if this is the case, universities may still have difficulty satisfying an audit to prove compliance with the National Principles because of the degree of uncertainty to which this gives rise. Compliance is an issue because funding from the large national research funding agencies is, in most cases, contingent on universities complying with the National Principles, and any difficulty in demonstrating compliance could place funding at risk in certain cases.

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