

Intellectual Property Rights and Competition

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A Introduction

1. This paper considers the relationship between the competition laws and the laws relating to intellectual property. Its primary purpose is to explain the economic context of intellectual property, as it has shaped the manner in which issues related to investment in creative effort have been treated in Australia, and to assess the implications of changes currently proposed in the exposure of intellectual property arrangements to the Trade Practices Act 1974 (the 'TPA')¹ (which is the primary instrument of competition law in Australia).
2. The structure of this paper is as follows. The paper begins by considering the economic characteristics of intellectual property; it then considers the economic consequences of those characteristics, prior to examining the interaction between the rights conferred under the intellectual property statutes and competition. On that basis it considers the current Australian framework, under the Trade Practices Act, for managing the interaction between the intellectual property statutes and competition, and also reviews proposals, now adopted by the Government, for reform of that framework. From this it turns to consider how competition issues related to intellectual property may be addressed once those reforms are enacted.
3. It is worth saying at the outset that there are some important aspects of intellectual property that are not covered in this paper. In particular, the issues associated with trade-marks, though they are of great commercial significance and vital to a competitive economy, are not dealt with, in part because they have not figured so prominently in considerations of competition policy.

B Economic characteristics of intellectual property

4. It is generally considered that five features of creative output are especially relevant to the issues discussed in this paper. Each of these characteristics poses challenges to the functioning of market mechanisms.

¹ Henceforth, unless explicitly stated otherwise, all references to statutory provisions are to the *Trade Practices Act 1974 (Cth)* (the 'TPA').

Riskiness

5. While all investments – commitments made today with a view to securing returns in future – are risky, it is widely accepted that the risk involved in investment in creative effort is especially great. Most creative outputs add little to the existing stock of knowledge, and many prove to have no commercial value. Only a few prove significant, and of those, an even smaller number ultimately have great value. The probability of success is, in other words, low.
6. Given this low overall probability of success, returns, in those instances which do prove valuable, must be very high indeed if capital is to be used for investment in creative effort. This is all the more the case as the risk involved is far from being normally distributed (funds invested are not about as likely to earn more than average as less than average) and cannot be readily eliminated by ‘spreading one’s bets.’
7. There is an obvious risk that the very high returns accruing to a small number of ‘winners’ will be confused for monopoly profits. In fact, to the extent to which they merely compensate for the risks initially borne, they are no more than the opportunity cost of capital. Additionally, if these returns are in some way removed, without the risk of loss being reduced, investment in creative effort will be deterred.

Non-excludability

8. Securing appropriate compensation for the results of investment in creative effort is complicated by a second feature of creative endeavours. This feature is variously described as **non-excludability**’ or ‘non-appropriability’. Simply put, this means that, in the absence of specific arrangements to the contrary, the creator could not *exclude* others from sharing in the outputs at issue, or *appropriate* the benefits they generate.
9. The concept of excludability is merely another form of the economist’s concept of *externality*. An externality is an unrequited service: that is, a situation in which one party provides a service to another without the recipient of the service paying for or being paid for the service at issue. A lighthouse provides external positive benefits (‘goods’) to all ships that sight it; a smoke-emitting factory provides external negative benefits (‘bads’) to those who live close to it.

10. Excludability is a matter of degree. It depends on the technology used to produce and consume the service. It also depends on the legal arrangements surrounding the service, and most notably the structure of property rights: in principle, the community surrounding the factory could be given a 'property right in clean air', so that the factory, if it wanted to use smoke-emitting technologies, would need to compensate the residents.
11. Those who describe the outcomes of creative efforts as being characterised by non-excludability simply mean that in the absence of specific legal arrangements to the contrary, it would be especially difficult for creators to prevent others from appropriating the benefit of their work. They could not, in other words, devise arrangements for themselves that 'internalised' the externality.
12. This is being altered to some degree by technology. It is presumably somewhat easier now for creators, at least in those areas where the output of creative efforts is reduced to digital expression, to use 'self help' means (such as encryption) to retain control over their output.
13. Additionally, even in the absence of such self-help, creators can to some extent use secrecy to prevent others from appropriating the benefits of their investment. However, though remedies such as secrecy do have a role, they come at a cost. Secrecy naturally limits the revenues the creator can obtain from the creation, say through its sale or transfer; the creator also has to invest resources in securing and maintaining secrecy; and society more widely suffers from limited access to the creation.
14. Overall, non-excludability creates three sets of social costs.
15. First, non-excludability conflicts with the conditions for efficient investment. As a general matter, efficient investment requires that resources be devoted to creating ideas up to the point where the opportunity cost of those resources (their value in the most highly valued alternative use) equals the benefit society will derive from that investment. If investment choices are made on a profit-maximising basis, efficient investment in ideas requires that investors secure a return that, at the margin of investment in creative efforts, reflects the differential efficiency their idea contributes

– that is, that the anticipated return to the marginal creator equal the anticipated gain to society from having the creation relative to not having it.

16. This simply means that for efficient private investment in creative effort to occur, investors must expect a return that at the margin is equal to the gain society makes from the creation their investment will permit.
17. Note that the efficiency condition set out above is one that must hold at the *margin* of investment in creative effort. From an economic point of view, it does not mean that *on average*, investors in creative effort must be able to appropriate the full social benefit of their creation; rather, it is sufficient that they expect their costs to be covered, so long as those costs are no less than the resulting social gain. At the margin, however, the expected return to the investor and to society should be equalised. It follows that if the marginal investors in creative effort cannot appropriate the full social benefit of their creation, socially desirable investment would not occur.
18. Second, in the presence of limited appropriability it is difficult for control over the commercial exploitation of ideas to be vested in those who can put them to the best use.
19. This is because in a situation in which creators could only protect their creations through secrecy, they would have little ability to disclose their creations to potential purchasers or to negotiate in any detail with those purchasers. Moreover, greater difficulty would attach to describing the substance of any assets being transferred. Non-excludability therefore conflicts with the efficient allocation and exchange of rights over ideas.
20. Third, in the presence of non-excludability, creators will waste resources in costly efforts to protect their creations while those seeking to appropriate them will invest in circumventing those measures. Some part of the resources thus used could be saved were property rights over the creations properly defined.

Jointness in consumption or ‘Non Rivalry’

21. A third economic characteristic creative endeavours can be described as ‘**jointness**’ in consumption or as ‘non rival’ consumption. This means that consumption of the

outputs of creative effort does not reduce the supply available for future consumption. Given an orange, if Sam eats it, that orange is not available to John. However, Sam's knowledge of a poem does not reduce the volume of poetry available to John. Oranges display rivalry in consumption; poems do not.

22. Analytically, jointness is merely a way of saying that the cost of serving an additional unit of consumption, given that a first unit of consumption has been served, is nil. The marginal opportunity cost of supply, for any unit other than the first, is zero.
23. Jointness is a matter of degree. Goods for which marginal costs are very low, given that a first unit has been produced, display it to some extent.
24. The polar form of jointness, in which the marginal opportunity costs are zero once the first unit of consumption has been served, applies to the non-material results of the creative process, rather than to the physical support usually used to distribute those results. The story in a book (in the sense of the words and their arrangement) is non-rival in consumption but the physical book itself is not. Increasingly, though, the distribution means themselves are characterised by some degree of jointness. For example, the marginal costs of making another copy of an electronic document are close to zero.
25. Just as non-excludability creates difficulties for the conditions for efficient investment, jointness creates a tension between securing efficient investment and securing efficient consumption.
26. While *efficient investment* requires that each creative effort have a claim on the social benefits it yields, *efficient consumption* requires that each potential consumer faces a price for an additional unit of consumption that reflects the marginal social cost of that consumption. For efficient consumption decisions to be taken about apples, the consumer must face a price for consuming an additional apple that reflects the cost to society of producing one more apple; the same principle applies to poems and to patented ideas.
27. The marginal cost of a creation, once the first unit of demand has been served, is zero or close to it. As a result, if efficient consumption is to be attained, the price of creations at the margin of consumption would have to be very low or zero.

28. If creators could exclude those who did not pay from consuming the output of their creative efforts, and if creators could efficiently price discriminate, the conditions for efficient consumption could be met simultaneously with those for efficient investment. In this case, price discrimination simply means charging for each unit on the basis of the willingness to pay for that unit. Perfect price discrimination means being able to do this in such a way as to perfectly align price with willingness to pay. For example, a high price might be charged for those uses where the idea was highly valuable, while the price would be set to zero at the point where the marginal cost of using the idea consumed all of the efficiency it brought.
29. Analytically, there is a close relation between the notion of perfect or fully efficient price discrimination and that of internalising externalities. When a firm reduces price from above marginal cost to marginal cost, it confers a benefit that would not otherwise accrue – that benefit being the gain to the marginal consumer that would otherwise forego consumption. That benefit (technically, the consumer surplus the consumer obtains) is an externality. A firm that can price discriminate perfectly captures this benefit for itself, internalising the externality.
30. As a general matter, however, perfect price discrimination is not of this world. There is consequently a tension between resolving the non-excludability issue – which usually implies giving creators control over the pricing of their creation – and efficiently allocating the creation once it exists.
31. This does not only affect final consumption but also the use of creations as inputs to other outputs. When creations are priced above their marginal cost, less use will be made of them as inputs than would be socially desirable. There is then a productive inefficiency, in the sense that society's output is not being produced at least cost.
32. How significant these distortions are in practice depends on the extent to which those who exercise control over ideas can in fact price discriminate and where they cannot, can use other means to reduce the distortions in consumption that flow when creations are priced at more than marginal cost.

Cumulativeness

33. The fourth economic characteristic of creative efforts is '**cumulativeness**'. All that is meant by this is that ideas are inputs into the production of future ideas – the 'standing on the shoulders of giants' effect.
34. Seen from an economic point of view, cumulativeness is a form of potential externality. Future innovators benefit from access to the existing stock of innovations. At least potentially, there is a shared benefit.
35. In a perfect world, the developer of a creation (the 'first stage innovator') and potential investors in a subsequent creative effort that depended on that creation (the 'second stage innovators'), would bargain in such a way as to ensure that any worthwhile second stage innovations proceeded. The bargain would internalise the potential externality, thereby correcting it.
36. In reality, however, effecting such bargains can be difficult, to the point where the costs of securing the bargain may consume all of the gains it could bring. As a result, some worthwhile second stage innovations will not occur. Additionally, the failure may compromise some first stage innovations, to the extent to which their attractiveness depends on revenue opportunities associated with innovations at the second stage.
37. The cumulative character of creation gives rise to a trade-off in which strong rights to today's owners may limit future creation. This trade-off is obviously a complex one, as the strong rights can (1) themselves increase the availability of first stage innovations, providing more (or higher) shoulders for future innovators to stand on, and (2) raise the reward to the future creation (to the extent they too benefit from the strong rights), while at the same time (3) increasing the costs second stage innovation involves. There are distributional consequences that flow from this (that is, some creators lose while others gain), but what matters from the perspective of society is the net impact on investment in creative effort. Recent economic journals contain a lively, but inconclusive, debate on the extent of this impact and on its determinants.

Network effects and interdependence

38. A fifth characteristic that pertains to creative effort in at least some areas is the relevance of **network effects**.
39. Network effects arise in situations in which the benefit derived from an activity increases with the number of participants that activity attracts. These effects can arise in consumption, production or both. Telephone networks provide a simple example of a network effect in consumption: the value of being connected to such a network increases with the number of subscribers one can call. Network effects in production arise, for example, when an operating system with a larger base of users attracts a greater number of suppliers of complementary products, such as applications software.
40. Some but not all network effects involve externalities. When Jane connects to the Internet, on the basis that she now values access to electronic mail sufficiently to cover the costs involved, she confers an external benefit on Sam, since once she is connected, Sam can benefit from exchanging emails with her. In a perfect world, the price Jane faces for connecting would be discounted to reflect the benefit that thus flows to Sam; if it is not, Jane may connect later than would be socially desirable (or not connect at all). When these interdependencies are not completely reflected in prices, the price mechanism is not fully playing its role of **coordinating** Sam and Jane's decision-making in such a way as to ensure that they take decisions that maximise wealth – that is, the value of the network to its users.
41. Coordination failures can also arise in the context of production. Linux may be a highly desirable operating system; however, realising its value depends on ensuring a host of complementary investments in applications software compatible with it. It would obviously be difficult for these coordinated investments to occur if those who carried them out could not appropriate and then divide the gains they permit society to obtain. As a result, the costs of non-excludability in terms of deterred efficient investment, may be especially great in situations where network effects are significant.
42. As with the other characteristics discussed above, dealing with network effects depends on devising mechanisms for 'internalising' the externalities – that is, for

ensuring that those parties that are involved in a complex of interdependent transactions can each take decisions informed by the full costs and benefits, to the network as a whole, of their actions.

43. For example, network effects in demand need not distort consumption if the network owner has both an interest in and the ability to maximise the value of the network. The owner can then set price in such a way as to signal to Jane the gain the network as a whole accrues from her membership – subsidising Jane’s access while taxing Sam’s.
44. Equally, a network owner with both an interest in and the ability to maximise the value of the network can secure coordination in investment decisions. The owner can do this by signalling to investors in complementary assets (that is, those assets that will enhance the network’s value) the gain that will occur from their investment. This obviously requires that the network owner be able to compensate the investors in complementary assets for the gain they bring. This in turn requires some mechanism by which the network owner can secure that gain and then transfer it.
45. In that sense, solving the issues associated with network externalities generally requires, or at least can be assisted by, solutions to the problems of non-excludability.
46. A specific solution to some aspects of the problem of network externalities is provided by compatibility standards – that is, standards that allow goods and services provided by distinct suppliers to inter-work. These are essentially permissive, in the sense that they provide for inter-working, rather than securing coordinated supply. These standards can be set through negotiation, by regulation or simply through market selection leading to a *de facto* standard.
47. Where compatibility standards are set by negotiation, they can raise issues about any horizontal and vertical agreements necessary to give effect to the standard – aspects of these issues are dealt with below. Where they emerge as a *de facto* standard through the operation of market forces, the concerns are more likely to involve the unilateral abuse of market power.

Conclusions on specific characteristics

48. A wide range of goods other than the results of creative effort display the characteristics set out above. For example, light-houses and free-to-air TV channels are each characterised by jointness in consumption and provide services that are thought to be non-excludable. However, it is reasonable to think that these characteristics are more extreme in the case of the outputs of creative efforts than in most other cases.
49. The main feature that flows from these characteristics is that, left to their own devices, it will be difficult if not impossible for investors in creative effort to align the rewards from that investment with its costs. They will not, in other words, be able to bargain their way around the externalities associated with creative effort. The result will be under-investment and distorted investment in creative effort and in activities complementary to creative effort. At the same time, control over the outputs of creative effort will not be transferred to those who can put these outputs to most productive use.

C Consequences of the economic characteristics and the role of IP

50. Intellectual property rights are generally seen as central to the means by which society addresses the characteristics set out above.
51. By allowing creators to appropriate a greater share of the social benefits associated with their creation, intellectual property rights can help support **efficient investment**.
52. Additionally, by delineating ownership, intellectual property rights facilitate the transfer by sale or assignment of the outputs of creative efforts. Because their rights are protected, creators can disclose the details of their property without losing the ability to benefit from it. They can therefore negotiate transfers more readily than they otherwise could. At the same time, the right itself can be used to define what it is that is being transferred or sold.
53. As a result, intellectual property rights support the **efficient exchange** of creations that is, their allocation to those who value them most highly. Because this increases

the value of creations – both to the creator and to society – it further supports efficient investment in creative effort.

54. Efficient exchange is especially important for two reasons.
55. First, successful use of many ideas, notably in the applied sciences, requires the bringing together of the outputs of many innovators. Many products, particularly those that are ‘cutting edge’, involve combining ideas from many sources. Institutional mechanisms that reduce the transactions costs this involves can substantially increase productivity.
56. Second, creative effort differs from most organised forms of market-mediated production in that it involves significant actors that are not strictly commercial in character. More specifically, public and quasi-public institutions – such as universities and research institutions – play a central role in investment in creative effort, especially in Australia.
57. These institutions are ‘idea generators’, rather than producers of tangible goods embodying those ideas. They have limited scope to secure the benefits of creativity by diversifying into the direct commercial supply of goods and services. To secure a return on their investment, as they are increasingly required to do, they must be able to transfer the use of their ideas to third parties. Again, to the extent to which intellectual property rights facilitate this process, they can increase society’s return on the investment it makes in these institutions.
58. A dimension of efficient exchange is that between first-stage and second-stage innovators. To the extent to which clear delineation of rights also helps promote bargains between sequential investors in innovation, it can allow the innovation decisions of tomorrow to be coordinated with those already made.
59. Finally, the delineation of intellectual property rights can help address network externalities. This occurs when ownership rights to the network are defined, creating a basis for decision-making that enhances the network’s value.
60. Where rights thus created are dispersed, rights owners can, by pooling their rights, secure a joint return on investments that increase the value of the network. Where the

initial rights are centralised, the overall network owner can act as an ‘externality manager’, coordinating and rewarding complementary decisions.

61. However, the benefits identified above of intellectual property rights are obtained at a cost.
62. To begin with, the rights themselves are typically a reasonably blunt instrument, and there can be no assurance that the compensation they provide is ‘just right’ in inducing creative effort. It has, in particular, often been claimed that the rights provide too much compensation to infra-marginal creators – so that society would ‘pay too much’ for the innovations it secures. Whether this is indeed the case, or how great its economic consequences are, are empirical matters that are far from having been resolved.
63. Relatedly, it is conceivable that intellectual property rights induce *too much* investment. This is mainly because the rights, unless their value is exactly matched to the cost society necessarily incurs so as to secure the creation, can provoke a ‘race’ in which competing investors duplicate each others’ efforts in an attempt to be the first to secure the prize. Whether this happens depends to a degree on the design of the rights and of their allocation mechanism; whether it is harmful from a social perspective, and if so by how much, depends on how the costs of the duplication compare to any benefits society derives by the greater speed of creative progress.
64. The rights themselves, and competition to secure them, can therefore lead to waste in the process of creation.
65. Additionally, the rights can distort consumption decisions once the process of creation has occurred. This is for four reasons.
66. First, in the absence of perfect or near-perfect price discrimination, the price of creations protected by intellectual property rights will not be set, at the margin of consumption, to the relevant marginal cost – that is, zero. As a result, too little use will be made of creations.
67. The inability of creators to engage in perfect price discrimination can lead to a second distortion. This occurs when potential users of, or competitors to, the creation devote

resources to ‘inventing around’ the rights. From society’s point of view, the resources thus used are wasted, at least to the extent to which they do not result in improvements on the original creation.

68. Third, creators, because they cannot perfectly price discriminate, cannot be expected to most efficiently support cumulative innovation. Rather, they may increase costs to future creators, discouraging some socially worthwhile investment in creative effort.
69. Fourth, for the same reason creators will not always succeed in securing the bargains needed to coordinate the multiple decisions involved in coping with network effects and other instances of interdependence in innovation. Indeed, to the extent to which the rights fragment or disperse control over interdependent creations (that is, over creations whose value is maximised when they are worked together), they may create a ‘tragedy of the anticommons’ in which innovations that would otherwise be brought together are not.
70. The costs associated with these distortions may be especially high when network effects are significant.
71. Where network effects are significant, pricing above marginal cost has the potential to impose greater social losses than it usually would. This is because the above cost pricing does not only lead the marginal consumer to forego some consumer surplus, but also imposes a loss on all network users – as the user base as a whole would have benefited to some extent from the foregone network expansion. In the jargon of economics, there is an infra-marginal loss, as well as the more standard marginal loss.
72. Additionally, intellectual property rights may affect competition between networks. More specifically, networks characterised by weak rights, or by a decision not to exercise rights, may not be able to compete on the merits with networks characterised by strong rights. For example, it may be difficult for a non-proprietary operating system such as Linux to displace a proprietary system, despite technical superiority. Given that the non-proprietary nature of Linux confers some gains on those users it does obtain, it is not an answer to this issue to suggest that Linux too should adopt the proprietary model.

73. Three points summarise these considerations. The first is that intellectual property rights do address the central consequences of the features of creative outputs identified above. The second is that a key means by which they do this is by facilitating bargaining and contracting over rights and their allocations. The third is that they achieve their benefits at a cost. It is therefore certainly not true as a matter of economics that ‘stronger’ rights are always preferable to ‘weaker’ rights.

D Intellectual Property Rights and competition – general considerations

74. As a general matter, intellectual property rights, as with other forms of property, are a right to exclude. The specific form of this right to exclude is a temporary right to prevent others from replicating the protected features of the creation covered by the right. The scope of that exclusion is defined by the type of intellectual property right at issue.
75. This is at the very least a right to prevent the supply of perfect substitutes. In some cases, the right extends to preventing the supply of any form of economically relevant substitutes – that is, it involves conferring a right to be the sole supplier in a relevant market for a specified period of time.
76. It is a matter of philosophy whether there is here a difference of degree, if not of kind, relative to simpler property rights, such as those in real property. The right to real property is a right to possession and its benefits; exclusion is merely the natural corollary of the right to possess. My right to my bedroom gives me a right to exclude you in so far as that is needed to ensure that I can possess my bedroom; it does not give me a right to prevent you from enjoying your bedroom, if you can do so without undermining my possession of the bedroom I own. In contrast, an intellectual property right allows me to exclude you from having an idea more or less like mine (depending on the right involved) even though the fact that you have that idea in no way reduces my ability to have that idea myself.
77. This right to exclude acquires its legitimacy as a social institution from the effects it has on the supply of creations, and through that supply on living standards. More specifically, it reflects the view that creators must be able to appropriate some part of the social gain associated with their creation if investment in creative effort is to

occur. Exclusion of more or less perfect substitutes is the means by which that appropriation occurs.

78. This mechanism has an inherent balancing in it. The greater the social benefit from the creation, the more valuable will be the right to be its sole supplier and the greater the degree of exclusion effected by the right. Economically significant monopolies are only awarded to those who provide great benefits. In contrast, a system that rewarded creators through state grants or subsidies could not hope to be as effective in matching the reward with the contribution.
79. From a societal point of view, the incentive provided by this mechanism provides a significant stimulus to dynamic competition – that is, to competition through innovation. As this is the form of competition that over the longer term is the most powerful, intellectual property rights make for greater and more potent rivalry.
80. The right to exclude can however be used to seek for the creator more than the social gains associated with the creation. This occurs when the right is used to distort competition in ways that go beyond the mere exclusion provided for in the right itself. Competition policy can and should view these instances with concern, and be capable of being applied when these instances occur.

E Intellectual Property Rights and competition – the current Australian situation and international comparisons

81. Despite the considerations set out above, section 51 of the Trade Practices Act provides a number of limited exemptions from competition law. It begins by stating:

51 Exceptions

(1) In deciding whether a person has contravened this Part, the following must be disregarded:

(a) anything specified in, and specifically authorised by:

(i) an Act (not including an Act relating to patents, trade marks, designs or copyrights); or

(ii) regulations made under such an Act;

82. Intellectual property laws excluded by s. 51(1) are instead specifically provided for in s. 51(3), which exempts the imposing of or giving effect to conditions of licences and assignments from certain sections of the Trade Practices Act concerning restrictive trade practices, to the extent that those conditions *relate to* the subject matter of the relevant intellectual property right. In the case of trade marks, the exception applies only to the extent that the conditions relate to the kinds, qualities and standards of goods bearing the trade mark.
83. Section 51(3) exempts intellectual property licences and assignments only from certain sections of the TPA. These sections and their subject matter are as follows:

Section	Subject matter
45	<i>Collusive conduct</i> : contracts, arrangements or understandings are prohibited which contain an exclusionary provision or have the purpose and effect of substantially lessening competition.
45A	<i>Contracts, arrangements or understandings in relation to price</i> : contracts, arrangements or understandings are deemed to have the purpose or effect of substantially lessening competition if a provision has the purpose or effect of fixing, controlling or maintaining prices for, or providing discounts, allowances, rebates and credits in relation to, goods or services.
47	<i>Exclusive dealing</i> : supply by a corporation of goods or services to a third party is prohibited on terms constraining dealings with competitors of the corporation.
50	Acquisitions which would result in a substantial lessening of competition in a market are prohibited.
50A	The acquisition outside Australia of a controlling interest in a corporation which would lead to substantially lessening competition in a market is prohibited.

84. However, s. 46 (abuse of market power) and s. 48 (retail price maintenance) are not exempted².

² Indeed, *Queensland Wire Industries Pty Ltd v The Broken Hill Pty Co Ltd* (High Ct 1989) established that a breach of s. 46 TPA may compel IP licensing. More recent developments which support the proposition that s. 46 may be used to compel licensing are as follows:

- i) In 1995 the Australian Competition and Consumer Commission (ACCC) accused the Commonwealth Bureau of Meteorology of a breach of s. 46, due to a refusal to supply basic

85. There is substantial uncertainty surrounding the precise scope of the exemption s. 51(3) provides.
86. The Intellectual Property and Competition Policy Review Committee (the ‘IPCRC’ or the ‘Committee’) obtained an advice on the meaning and operation of s. 51(3) from the Australian Government Solicitor (the ‘AGS’). In its advice, the AGS highlighted the lack of clarity as to exactly which conduct is exempted. The ambiguity of s. 51(3) together with a lack of case law (there has only been one judicial decision, *Transfield v Arlo* (1980) 30 ALR 201, that has touched on s. 51(3)) has meant that the scope of the exemption has been subject to a range of interpretations.
87. One view is that almost any condition would relate to the copyright work or other subject matter and hence would be exempt. Accordingly, exclusive licensing, territorial restraints, price and quantity restrictions of intellectual property rights, regardless of their impact, would not contravene the TPA.
88. Another view is that a condition must relate directly to the work itself in order to be covered by s. 51(3). Hence conditions which, for example, specify the form of performance of a musical work, would be covered, but exclusivity conditions would constitute collateral arrangements between the parties and would not be covered by the exemption. This latter view of s. 51(3) renders the exemption ineffectual, as it would only exempt conduct that would likely not breach the TPA in any case.
89. The exemption from important provisions of the competition laws seemingly effected by s. 51(3) contrasts with the approach adopted in the major jurisdictions overseas.
90. In the **United States** conduct involving intellectual property is fully within the reach of the anti-trust laws.
91. In 1995, the US Department of Justice (the ‘DOJ’) and the Federal Trade Commission (the ‘FTC’) issued *Antitrust Guidelines for the Licensing of Intellectual Property*

meteorological information to a competitor. In the end a settlement was reached between the parties.

- ii) In *Telstra Corporation Limited v Desktop Marketing Systems Pty Ltd* [2001] FCA 612 copyright in telephone directories was upheld, but the possibility that Telstra might be required to license its copyright has not been ruled out.

including copyright, patent, trade secret and know-how. The *Guidelines* are designed to provide guidance for parties and to help them predict whether the DOJ or the FTC will challenge a particular practice as anti-competitive. The *Guidelines* embody three general principles:

for the purposes of antitrust analysis, intellectual property is comparable to other forms of property;

there is no presumption that intellectual property creates market power in the antitrust context;

and intellectual property licensing allows firms to combine complementary factors of production and is generally pro-competitive.

92. An antitrust ‘safety zone’ is also created under the *Guidelines*. In general, the DOJ or the FTC will not challenge a condition in an intellectual property licensing arrangement if: the restraint is not facially anti-competitive; and the licensor and licensee collectively account for no more than 20% of each relevant market significantly affected by the restraint. In addition, a restraint will not be challenged if: the restraint is not facially anti-competitive; and four or more independently controlled entities in addition to the parties to the licensing arrangement possess assets, characteristics and incentive to engage in research and development that is a close substitute for that in the intellectual property arrangement. These are somewhat higher thresholds than apply in other areas of federal enforcement of the anti-trust laws. The Agencies will consider arrangements outside the ‘safety zone’ based on the considerations set out in detail in the *Guidelines*.
93. The **European Union** has taken a different approach to the question of when intellectual property licensing activities may result in anti-competitive conduct, and created a number of Group Exemptions, exempting categories of conduct deemed to be in the public interest. Arrangements that meet all the conditions for application under the regulations are automatically exempted from the prohibitions on anti-competitive practices set out in the Treaty of Rome.
94. There are eight group exemptions, which include a regulation on technology transfer agreements, and on research, development and exploitation of the results. For example, under the Technology Transfer Regulation, certain types of intellectual

property licences are deemed to be acceptable, and certain types of conduct are made unlawful. Article 3 makes unlawful a number of specific covenants in an intellectual property licence such as export, customer and price restrictions, obligations to assign improvements to the licensor, and quantity limitations.

95. In general, for an agreement to qualify for a group exemption, it must meet each of the conditions set out in the relevant group regulation. The regulations are, in other words, interpreted narrowly, and hence provide contracting parties with few opportunities to depart from the approved template.

96. In **Canada**, the Canadian Bureau of Competition released draft guidelines in 1999 for the treatment of intellectual property rights under the *Competition Act*. These relevantly read:

(4) The purpose of these Guidelines is to alleviate uncertainty that the business community may face concerning this interface and to promote transparency in the enforcement of the Competition Act. These Guidelines explain how the Bureau will assess business arrangements involving intellectual property.

(6) The Bureau's approach to the application of the Competition Act to intellectual property is based upon the following broad framework:

(a) in general, the majority of circumstances pertaining to intellectual property will be dealt with under the general provisions of the Competition Act. In such cases, the Bureau will only take enforcement action if the owner of an intellectual property right engages in conduct that is beyond the statutory and common law intellectual property rights and the conduct is anti-competitive;

(b) underlying this approach is the presumption that the exercise of an intellectual property right is not considered anti-competitive in and of itself;

(c) while intellectual property has important characteristics that distinguish it from other forms of property, the same competition analysis can be applied to conduct involving intellectual property, as to conduct involving other forms of property, to determine any anti-competitive effects. The guidelines demonstrate how the special characteristics of intellectual property can be taken into consideration in the context of this competition analysis.

97. The Canadian draft guidelines also note that:

(12) Intellectual property has unique characteristics which make it difficult for owners to exclude others and profit from their intellectual property. First, intellectual property is typically non-excludable; it is impossible or at least very costly for owners of intellectual property to exclude others from its use without legal recourse. The problem of non-excludability is exacerbated because, while intellectual property is often expensive to develop, it is often easy and inexpensive to copy. Second, intellectual property is typically non-rivalrous: two or more persons can simultaneously make use of an intellectual property right ... As a result, the task of establishing and enforcing private property rights in intellectual property is more difficult than for other kinds of property and the common and civil laws alone have not been considered as sufficient to protect most intellectual property rights.

98. In short, Australia is unusual in providing an exemption under the competition laws for intellectual property. However, this does not mean that in other jurisdictions, no account is taken of the particular characteristics of intellectual property in applying the competition laws. Rather, these characteristics are reflected in the provision of 'safe harbours' that protect conduct that is judged unlikely to cause harm, even though it might in other circumstances trigger anti-trust enforcement.

F Intellectual Property Rights and competition – recent reviews and reform proposals

99. Section 51(3) was reviewed by the National Competition Council (the 'NCC') which issued a report entitled *Review of Sections 51(2) and 51(3) of the Trade Practices Act 1974*. That review recommended that the section be retained, but substantially narrowed.

100. A further review was conducted by the IPCRC, which reported to the Attorney General and to Minister for Industry, Science and Resources in 2001.

101. The Committee recognised that intellectual property has important features that differentiate it, to a greater or lesser extent, from other property or assets. In particular, the Committee noted that intellectual property is typically non-excludable: that is, excluding others from using intellectual property, in the absence of an

effective system of IP rights, is difficult and in some cases impossible. Intellectual property is also typically non-rivalrous, in the sense that greater consumption by one party does not reduce the scope for consumption by others.

102. The Committee argued that partly reflecting these factors, and of great importance to the issue at hand, contracts and licenses and assignments have an especially pivotal role in securing efficient use of intellectual property. It identified three factors as being at work.
103. The first is that the initial owners of IP rights are often not the parties best placed to exploit the output of their creative efforts. This is most plainly the case with specialised inventors, who remain responsible for some of the most important innovations in industrial use; it also applies to small, research-intensive firms. In these circumstances, the Committee concluded, licenses and assignments are needed to ensure that control over the rights is allocated to the parties that can exploit them most effectively.
104. Second, in many if not most areas of technology, rights do not map simply into products. Commercial products will often embody technology covered by claims in tens or even hundreds of patents. And the inter-dependence between rights is even greater in the innovation process itself, which frequently involves combining technological inputs owned by multiple rights-owners. Complex webs of cross-licenses are required if these accumulated technical capabilities are to be put to productive use.
105. Third, even independent of the factors set out above, the costs of impeding efficient licensing of IP can be especially high. As has been noted above, knowledge is non-rivalrous: increased access to it by one party does not reduce the stock available to others. As a result, when parties are forced to ‘invent around’ existing knowledge, there is a risk that the resources consumed in the process will, in social terms, be largely wasted. Even when the result of ‘inventing around’ is greater immediate competition, and hence a lower allocative efficiency loss, the benefits can readily be swamped by the productive inefficiency the duplication of outlays entails.
106. The Committee concluded that it is consequently essential that firms have the scope to enter into efficient contracts that involve intellectual property rights, free of onerous

and ultimately counter-productive regulatory burdens. This implies that great care is needed in imposing on transactions in IP rights constraints that may be less costly when applied in other areas of property.

107. However, the Committee emphasized that this should not involve an open slather for owners of IP rights to act as they please, without regard to the community's interest in competitive markets.
108. The Committee recognised that the intellectual property legislation confers upon the intellectual property right holder a series of exclusive privileges that are designed to promote innovation. Given that these rights are conferred by legislation, they should be able to be effectively exercised even when this involves (as it generally must) the exclusion of others. However, these rights should not be capable of being used to **go beyond** the market power those rights directly confer³. That is, the right holder should not be allowed to extend the statutory right into a wider right of exclusion with the effect of substantially lessening competition.
109. Given this, the Committee took the view that achieving an appropriate balance between the needs of the intellectual property system and the wider goals of competition policy requires a careful re-framing of the s. 51 provisions. More specifically, the Committee found that this balance was best secured by including amendments in the TPA to ensure that a contravention of Part IV or section 4D of that Act shall not be taken to have been committed by reason of the imposing of conditions in a licence, or the inclusion of conditions in a contract, arrangement or understanding, that relate to the subject matter of that intellectual property statute, so long as those conditions do not result, or are not likely to result, in a substantial lessening of competition.
110. The practical effect of this recommendation would be to bring conduct that might otherwise be exempted within the scope of s.45, s.47⁴, s.50 and s.4D of the TPA.

³ See for instance *Australian Performing Right Association Ltd v Cerdale Pty Ltd* (Fed Ct 1990) and *Broderbund Software Inc v Computermate Products (Australia) Pty Ltd* (Fed Ct 1991) that exercising IP rights within statutory limits is not a breach of s. 46 TPA.

⁴ Recently the High Court found in *Melway Publishing Pty Ltd v Robert Hicks Pty Ltd* [2001] HCA 13 (High Ct) that the mere refusal to license, even when it leads to the exclusion of a potential competitor, is not a breach of s. 47 TPA.

However, for the conduct to be this caught, it would need to substantially lessen competition **as well as** meeting the other preconditions set down in those sections.

111. The Committee also recommended that the ACCC be required to issue Guidelines as to how it would enforce the revised sections.
112. The Government has announced that it has accepted the Committee's recommendations in this respect.

G Implications of reform

113. Given the proposed changes to s. 51(3), it will become of increasing importance for rights owners, their advisers and the Courts to test whether conduct that involves the imposing of conditions in a licence, or the inclusion of conditions in a contract, arrangement or understanding, that relate to the subject matter of an intellectual property statute, has the effect or likely effect of substantially lessening competition. This will require a careful economic assessment of the impact of the conditions on competition relative to the manner in which competition would have developed in the absence of those conditions.
114. As matters now stand, s. 46 is not covered by any exemption in favour of intellectual property rights. As a result, there is no reason why matters should change in this respect, at least in the sense that it is unlikely that conduct that it now lawful will, as a result of the proposed changes, become unlawful.
115. Rather, the areas affected are essentially the provisions affecting: horizontal agreements, vertical agreements, resale price maintenance (which under the Committee's proposals at least, would be permitted so long as it did not involve a substantial lessening of competition) and mergers and acquisitions. Each of these areas will be dealt with briefly in turn. Mergers and acquisitions will be treated with horizontal agreements, as the analytical issues involved are similar in essential respects.

Horizontal agreements, mergers and acquisitions

116. Agreements between competitors or potential competitors are relatively common in the area of intellectual property. Classically, these agreements have involved the

pooling of rights that are best exploited jointly. The agreements may involve joint operation of the rights – as in a patent pool; at the opposite extreme, the rights may remain dispersed, with the agreement serving to create a compatibility standard that allows the services produced by the various rights owners to inter-work.

117. There is an obvious link here to the concepts of cumulativeness and of network effects introduced in paragraphs 33 and 38 above. In these instances, by assisting in internalising the relevant externalities – that is, allowing third-party effects and interdependencies to be dealt with through bargains between the parties involved – the system of intellectual property rights assists in securing efficiency.
118. In assessing the competitive impact of such an agreement, it is obviously important to consider the extent to which the parties to the agreement face actual competition or well-placed potential competitors. In carrying out this assessment, it is relevant to consider two markets.
119. The first is the product market directly covered by the intellectual property. This market, which can be conveniently referred to as the ‘end market’, includes the goods and services that are close substitutes to the goods and services produced by means of the intellectual property that is the subject of the agreement. By ‘close’ is simply meant that the substitution is sufficient in scale and timeliness to impose competitive discipline on the owner or owners of the intellectual property. If there are such close substitutes to the outputs covered by the rights, and they are sufficient to prevent the rights-owners from exercising market power, then the agreement is unlikely to lessen competition.
120. A second market becomes particularly relevant when such close substitutes do not exist, though it may at times also be relevant at other times. This is the market for developing innovations, or more generally creations, that are substitutes for the creations covered by the rights. This second market is often referred to as an ‘innovation market.’ The premise is that competitive entry into the end market will require developing alternatives to the creations subject to the rights. The innovation market is the market in which those alternatives would be developed.
121. The factual issue with respect to the innovation market would be whether there are alternative sources of, say, R&D to those covered by the agreement. This requires an

assessment of the types of resources and more generally, the specialised assets (human, physical and organisational) needed to generate alternatives to the rights.

122. In some cases, it is likely that generating alternatives to the rights requires some access to the rights. In these cases, it will be relevant to the competition assessment whether the rights-owners are likely to grant such access.
123. Even if there are alternative sources, be in the end-use market or in the innovation market, the horizontal agreement may still effect a substantial lessening of competition if those sources are relatively few. As in the case of mergers, consideration of this issue requires an assessment in two parts.
124. First, if the agreement results in a substantial increase in the market presence of the parties to the agreements, it may confer upon them unilateral market power. This simply reflects the fact that as a result of the agreement, parties that previously competed – in the end-use market, the innovation market or both – would cease to do so. They may, as a result, acquire power they would not otherwise have to set price above the competitive level, to reduce investment in creative effort to below competitive levels, or in other ways depart durably from the conduct that would have been imposed upon them by competitive disciplines. Against this would need to be weighed any enhanced ability and incentive of the parties to compete with others as a result of the agreement.
125. Second, the agreement may affect the ability of the parties and of their rivals to engage in coordinated behaviour. For example, it may be that the agreement affects the intensity of rivalry between the parties to the agreement on the one hand, and their remaining competitors, in terms of R&D. Its effects would then be felt in the innovation market.
126. Economic analysis does not provide any simple or unambiguous answer to the question of how horizontal agreements that reduce the number of independent players in a market affect the extent of rivalry in innovation. Having said that, it seems reasonable to suppose that it is not easy for firms to tacitly coordinate behaviour in markets subject to significant innovation. This is because investment in creative effort is usually difficult to observe (though less so in activities where research must be disclosed so as to obtain regulatory clearance). It would consequently not be easy for

firms that had a policy of not seeking to undermine each other's position through innovation to monitor whether that policy was or was not being implemented. Additionally, it would be difficult for the firms to take action that 'punished' those that deviated from the policy, in the way that such action can be taken with respect to firms that (say) deviate from understandings as to price levels.

127. Overall, unilateral effects are likely to be the most substantial source of concern with respect to horizontal agreements that involve the imposing of conditions in a licence, or the inclusion of conditions in a contract, arrangement or understanding, that relate to the subject matter of an intellectual property statute, and hence are now exempted from s. 45 of the Trade Practices Act.
128. Of course, agreements that do substantially lessen competition may still be capable of authorisation⁵. It is here that the impacts of the agreements on efficiency would be of central importance. Relevantly, such agreements can materially increase the efficiency of investment in creative effort – by bringing together complementary creations, reducing duplication of effort and hence permitting 'greater bang for the buck', and allowing better coordination of sequential innovation. As noted above, these effects can make the parties to the agreement more effective as competitors to others in the relevant markets; additionally, they may well form the basis for a claim that there are public benefits to the agreement that outweigh the competitive detriment to which it gives rise.

Vertical agreements

129. Until the 1970s, restrictions built into vertical agreements involving the use of intellectual property were viewed with considerable suspicion by competition authorities, most notably in the United States.

⁵ Authorisation is a process that provides for the possibility of immunity from the prohibitions on anti-competitive conduct contained in Part IV of the Trade Practices Act – such immunity is obtained on a showing that the conduct creates a 'public benefit' that outweighs its anti-competitive effects. The conduct which can be authorised is set out in ss. 88 (1)-(9) TPA. In essence, all conduct that is prohibited by Part IV can be authorised with the exception of s. 46 (which relates to misuse of substantial market power for an anti-competitive purpose). However, it is worth noting that only future conduct that falls into this category can be authorised, not conduct that has already occurred.

130. In the 1970s, greater recognition was placed on the fact that these restrictions can often promote rather than hinder competition. In particular, exclusive dealing, in all its various forms, can serve to make distribution more effective, most notably by providing incentives for distributors to invest in promotional efforts. Equally, tying clauses may simply serve purposes such as allowing more effective metering of use made by a downstream buyer of the goods or services covered by intellectual property rights. This in turn allows more effective price discrimination, as intensity of use proxies willingness to pay, and hence allows for greater alignment between charges for access to intellectual property rights and costs (see paragraphs 26 to 32 above).
131. Seen in this perspective, vertical restrictions are essentially ways of managing externalities that arise because rights-owners cannot engage in price discrimination to anywhere close to a perfect extent. From an economic point of view, these restrictions, commonly allow third degree price discrimination to replace less effective forms of second degree price discrimination, and where second degree discrimination is implemented, make it more effective. (Economists generally regard second degree discrimination as less effective than third degree discrimination because its self-selecting nature implies that prices will be higher to the more elastic segment of demand. This is relative to the case in which the segments can be separately identified by the supplier and separately priced, without the risk of low elasticity consumers shifting over to the high elasticity price). Perhaps the most widespread instance of restrictions of this kind is in software licenses.
132. However, while it is indeed true that vertical restrictions can serve these purposes – which enhance efficiency, competition, or both – they may also serve to increase rivals’ costs in ways that harm the competitive process. Indeed, a single restriction may have effects that cut both ways, in which case a balancing assessment is needed.
133. Consider for example conditions in contracts whereby the purchaser (assumed here to be the ‘downstream’ user of the creation) pays a fee to the rights owner that depends on the number of downstream units produced, regardless of whether or not each of those units embodies the creation. There is some justification for this policy from an efficiency standpoint, as it makes the marginal cost to the user of including the

creation in the downstream unit zero – which reflects the marginal social cost of an additional unit of use (see paragraph 27 above).

134. However, by the same token, the policy increases the cost to the user of substituting against that creation – for example, by replacing it by a competing creation which it could not use for all units, but which it can use for some. This in turn, may prevent the competing creation from benefiting from network effects (see paragraphs 38 and follows, and for a consideration of impacts, paragraphs 70 and follows). This raises the potentially substitutable creation's long term costs, possibly precluding it from becoming an effective competitor. A situation such as this was at issue in *United States v. Microsoft Corporation*, 159 F.R.D. 318 (D.D.C. 1995), *rev'd*, 56 F.3d 1448 (D.C. Cir. 1995).
135. As with horizontal agreements, both unilateral effects and the scope for the condition to affect concerted action will need to be assessed.
136. Finally, there is of course scope for authorization, subject to efficiencies and more generally public benefits being identified that outweigh the costs to the community of any competitive detriments.

Resale price maintenance

137. Resale price maintenance has generally been condemned *per se*, presumably on the basis that it is so likely to reduce price competition, and so unlikely to be beneficial in other ways, as to justify a presumptive prohibition.
138. The IPCRC noted that, in the early 1970s:

...most participants in the policy debate would have reasonably assumed that many practices that involved tying, bundling, price discrimination or resale price maintenance were primarily means of lessening competition and exploiting consumers. Today, in contrast, it would be recognised that while these practices can lessen competition in some circumstances, there are many other instances in which they enhance efficiency and indeed make for more vigorous rivalry. The presumption of harm would therefore require far more nuance than appears in the prohibitions as they stand.

139. The Committee went to say that:

This is not to deny that significant change has occurred in respect of the relevant provisions. For instance, the repeal in 1995 of s.49 of the Act highlights the adjustments that have been made in the face of changed circumstances and understanding. Nonetheless, it remains the case that the Act establishes a presumption that seems adverse to a range of conduct that may be more uncertain in its effects.

140. Full implementation of the Committee's recommendations will allow resale price maintenance when (1) it occurs by means of the imposing of conditions in a licence, or the inclusion of conditions in a contract, arrangement or understanding, that relate to the subject matter of an intellectual property statute, and (2) does not have the effect or likely effect of substantially lessening competition.
141. As with other forms of vertical restrictions, resale price maintenance can be efficiency enhancing. It is most likely to do so when it serves to align the incentives distributors have to invest in promotional effort with those of the owner of the intellectual property right. Resale price maintenance is also likely to be of importance to rights owners when they seek to promote wider use of their creation but do not want that wider use to erode revenues from existing uses.
142. However, resale price maintenance can also serve to lessen competition. This is most notably the case when it facilitates coordinated pricing among owners of competing creations – for example, of substitutable patents.
143. Whether resale price maintenance will have an adverse effect on competition is obviously dependent on the range of substitutable output covered by resale price maintenance agreements. As a result, it is important to consider possible incipency effects, whereby a practice that may not be harmful in the small, will impose social costs once it becomes widespread.
144. Also clearly relevant here is the extent of entry barriers into the markets at issue, including in the market for generating creations that can be effective substitutes to those covered by the condition. That is, an analysis needs to be undertaken of the scope for entry into the end-use markets and related innovation markets.

Assessment

145. Because of the special characteristics of intellectual property, conduct that in other areas would most likely cause substantial harm to competition may not where it involves the exercise of rights over creations. Rather, it may serve to increase efficiency and hence render the parties to agreements more effective competitors to their rivals than they would otherwise be. As a result, special care is needed in considering the competitive effects of the imposing of conditions in a licence, or the inclusion of conditions in a contract, arrangement or understanding, that relate to the subject matter of an intellectual property statute.
146. It is also true that the cumulative character of creation, and any network effects relevant to a particular creation, may have a substantial impact on this assessment. On the one hand, the condition may allow the creation at issue to better manage these aspects of its economic context; however, the condition may also prevent competing rights owners from securing network effects or properly managing cumulateness.
147. The assessment of competitive effects must focus on the extent of remaining competition, including potential competition. Relevant here are entry barriers, not only into the end-use market but also into the innovation market. These are mainly affected by the specialised assets needed to create substitutes to the subject matter of the rights. In some cases, it will be highly relevant to consider whether potential competitors can have access to the protected subject matter for the purpose of developing alternatives.
148. Concern has at times been expressed that innovation markets may be difficult to define and establish. This can indeed be the case, though the difficulties are likely to be less acute in areas such as pharmaceuticals where regulatory processes tend to generate lists of the firms active in particular fields and provide a basis for assessing how close or far they are from completing product development and testing.

H Conclusions

149. Proposed amendments to the Trade Practices Act could have the effect of exposing to the provisions of that Act conduct that involves the imposing of conditions in a licence, or the inclusion of conditions in a contract, arrangement or understanding,

that relate to the subject matter of an intellectual property statute, where the effect or likely effect of the conduct is to substantially lessening competition.

150. This will align the situation in Australia with that in major jurisdictions overseas. At the same time, the fact that conduct will only be caught if it has the effect or likely effect of substantially lessening competition recognises the distinctive economic characteristics of creative effort.
151. It will be important that the implementation of the new provisions recognises these characteristics. The analysis that will in each case be needed must take account of the complexities that arise from limited appropriability, jointness in supply, cumulativeness and potential network effects. Contracts between rights owners, and between rights owners and users, play a key role in allowing the efficient management of these complexities, and it is of obvious importance that they not be subject to onerous and unnecessary regulatory burdens.