



Standardisation and patent ambush: Potential liability under Australian competition law

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This article examines the problem of patent ambush in standard setting, where patent owners are sometimes able to capture industry standards in order to secure monopoly power and windfall profits. Because standardisation generally introduces high switching costs, patent ambush can impose significant costs on downstream manufacturers and consumers and drastically reduce the efficiency gains of standardisation. This article considers how Australian competition law is likely to apply to patent ambush both in the development of a standard (through misrepresenting the existence of an essential patent) and after a standard is implemented (through refusing to license an essential patented technology either at all or on reasonable and non-discriminatory (RAND) terms). This article suggests that non-disclosure of patent interests is unlikely to be restrained by Part IV of the Trade Practices Act (TPA), and refusals to license are only likely to be restrained if the refusal involves leveraging or exclusive dealing. By contrast, Standard Setting Organisations (SSOs) which seek to limit this behaviour through private ordering may face considerable scrutiny under the new cartel provisions of the TPA. This article concludes that SSOs may be best advised to implement administrative measures to prevent patent hold-up, such as reviewing which patents are essential for the implementation of a standard, asking patent holders to make their licence conditions public to promote transparency, and establishing forums where patent licensees can complain about licence terms that they consider to be unreasonable or discriminatory. Additionally, the ACCC may play a role in authorising SSO policies that could otherwise breach the new cartel provisions, but which have the practical effect of promoting competition in the standards setting environment.

1 Introduction

Formal standards, as developed by Standard Setting Organisations (SSOs), can promote competition by facilitating interoperability and lowering the cost to consumers of switching between competing products. However, when standards incorporate technology that is subject to patent protection, patent owners may be able to impose much more onerous licensing terms or fees than they would have otherwise been able to demand if their patented technology was not standardised. This can be particularly problematic where the existence of the patent or the supracompetitive terms are not disclosed until after the standard has been adopted and switching costs become high enough to

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discourage competition. This article examines the potential anti-competitive effect of 'patent ambush' in the standard setting process through the lens of Pt IV of the Trade Practices Act 1974 (Cth) (TPA).

This article considers two main scenarios: first, where a SSO member fails to disclose their relevant patent interests in a standard before the standard is set, and second, where after the standard is set the patent owner refuses to license their incorporated patented technology either at all or on reasonable and non-discriminatory (RAND) terms. This article concludes that non-disclosure of patent interests is unlikely to be restrained by Pt IV of the TPA. It also concludes that a patent holder will generally only face liability under the TPA for renegeing on a commitment to license patent interests on RAND terms if that refusal involves leveraging or exclusive dealing.

Because competition law does not provide a sufficiently certain and adequately tailored approach to limiting patent ambush, SSOs generally seek to develop contractual frameworks that require members to disclose their relevant patent interests and, in many cases, to agree to license any patent rights included in a standard on RAND terms.¹ Such private approaches can have pro-competitive effects by increasing competition amongst different technologies for inclusion in the standard on the basis of both technical benefits and price. However, the terms of SSO agreements can also have anti-competitive effects by suppressing royalties below the rate that patent owners could otherwise negotiate in a more competitive market. This article accordingly assesses whether actions taken by SSOs to impose specific licensing requirements on members in order to preclude patent hold up could give rise to liability under the new cartel provisions of the TPA. We conclude that SSOs face considerable scrutiny under the cartel provisions of the TPA and should tread carefully when attempting to regulate the inclusion of patented technology in their standards. In the current legal climate, the best measures that a SSO can take to prevent patent hold-up may in fact be largely administrative, such as regularly reviewing which patents are essential for the implementation of a standard, asking patent holders to make their licence conditions public to promote transparency, and establishing forums where patent licensees can complain about licence terms that they consider to be unreasonable or discriminatory.

A Standards and competition

A 'standard' can be broadly defined as community consensus on the specifications, procedures or functions of a particular material, product, method or service.² The most successful standards are those that provide

¹ Some SSO policies require or request licensing on 'fair, reasonable and non-discriminatory' terms (FRAND). Where relevant, this article will use as an example the IP Policy of Standards Australia, Australia's peak standards development body. Standards Australia adopts the same rules as set out in the International Organization for Standardization (ISO)/International Electrotechnical Commission (IEC)/International Telecommunications Union (ITU) Common Patent Policy, at <http://isotc.iso.org/livelink/livelink/fetch/2000/2122/3770791/Common_Policy.htm> (accessed 26 September 2009).

² Gary Lea and Peter Hall define a 'technical standard' as 'a recording of one or more solutions to one or more problems of matching persons, objects, processes or any combination thereof, and which is intended for common and repeated use in any technical

timely, widely adopted and effective solutions to technical problems.³ There is a complex relationship between standards and competition. On the one hand, standards can promote competition by facilitating interoperability between products made by competing manufacturers ('horizontal compatibility'), which increases the utility of products in the market by making them less costly for firms to produce and more valuable to consumers.⁴ Standards lower the cost to consumers of switching between competing products and services, thereby enhancing competition among suppliers.⁵ For example, interface standards ensure that all electrical goods in a country can plug into any electrical outlet,⁶ and new mobile phone standards are likely to lead to a dramatic reduction in wasteful production of chargers with proprietary connections.⁷ On the other hand, however, the standard setting process can sometimes lessen competition by displacing competitive market forces in choosing the preferred technology in a particular market.⁸

There are (broadly) two types of standards: 'formal' standards developed by SSOs⁹ and 'informal' (or 'de facto') standards which 'arise from the operation of the market, as consumers gravitate towards a single product or protocol and

field': G Lea and P Hall, 'Standards and intellectual property rights: an economic and legal perspective' (2004) 16(1) *Information Economics and Policy* 67 at 71.

3 US Department of Justice (DOJ) and the Federal Trade Commission (FTC), *Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition*, 2007, p 33, at <http://www.ftc.gov/reports/innovation/P040101PromotingInnovationandCompetitionrpt07_04.pdf> (accessed 26 September 2009) (the IP2 Report).

4 R Wolfram, "'Connection restored": *Broadcom v Qualcomm* appellate reversal on FRAND licensing obligation for wireless technology standard brings case back in line with mainstream antitrust precedent' (2007) *Standards Bodies & Patent Pools*, Law Seminars International Conference, p 1 <http://www.rwolframlex.com/articles_publications> (accessed 26 September 2009); IP2 Report, above n 3; H Hovenkamp, 'Standards Ownership and Competition Policy' (2007) 48 *Boston College L Rev* 87 at 90; R T Nimmer, 'Technical Standards Setting Organizations & Competition: A Case for Deference to Markets' (2008) *The University of Houston Law Center, Washington Legal Foundation Critical Legal Issues Working Paper Series No 155*, p 8, at <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1473431>; M A Lemley, 'Intellectual property rights and standard-setting organizations' (2002) 90 *California L Rev* 1889 at 1893; Centre for International Economics, 'Standards and the economy' Report prepared for Standards Australia, July 2006, at <<http://www.thecie.com.au/publication.asp?pID=116>> (accessed 1 November 2009).

5 Wolfram, above n 4.

6 IP2 Report, above n 3; Lemley, above n 4, at 1893, 1896.

7 See, eg, *One Plug to Fit Them All*, 2009, Freakonomics <<http://freakonomics.blogs.nytimes.com/2009/10/30/one-plug-to-fit-them-all/>> (accessed 2 November 2010).

8 Nimmer, above n 4. See also Lemley, above n 4, at 1900; IP2 Report, above n 3, p 34.

9 These organisations are sometimes referred to as Standard Setting Bodies (SSBs) or Standard Developing Organisations (SDOs). Increasingly, a distinction is also being drawn between traditional SSOs (including, for example, the International Organization for Standardization (ISO), the International Telecommunications Union (ITU) and the International Electrotechnical Commission (IEC)) and more technology-focused Consortium bodies (such as the World Wide Web Consortium (W3C) and the Organization for the Advancement of Structured Information Standards (OASIS)): see A Updegrave, 'The Essential Guide to Consortia and Standards' (2007) *ConsortiumInfo.org*, at <<http://www.consortiuminfo.org/essentialguide/whatisansso.php>> (accessed 26 September 2009).

reject its competitors'.¹⁰ Because collaborative standard setting processes raise important questions about obligations to disclose patent interests and potential issues about monopsony limitations on licence terms, this article will focus on the competition law issues raised by patent rights in the development and adoption of formal standards.

B Standards and patent rights

Where technical standards incorporate technology that is subject to patent protection, there is the risk of 'patent hold up' by the patent owner.¹¹ This article deals specifically with the patent ambush form of hold up, where, after a patent has been incorporated into a standard, the patent owner attempts to impose more onerous licensing terms or demands higher royalties than those reasonably anticipated by the SSO members.¹² At this point, it may not be commercially reasonable to switch to an alternative standard because of the sunk costs incurred in negotiating the standard and gearing up production and the anticipated costs of developing products incorporating the alternative standard.¹³ Patent ambush can inject inefficiency into the standard setting process by creating uncertainty, delay and higher than expected supply costs.¹⁴

Patented technologies are usually incorporated into a standard either because the SSO members were not aware of the existence of patent rights in the technologies or because the patent rights were deemed to be 'essential rights' covering knowledge that is indispensable for a product that has to comply with that standard.¹⁵ As noted by Bekkers, Verspagen and Smits,

¹⁰ Lemley, above n 4, at 1899.

¹¹ Patent hold up is but one problem associated with the standard setting process. Another, not covered here, is where a company 'hijacks' a standard by adopting it and then amending it to incorporate proprietary 'improvements'. This can have the effect of fragmenting the standard, in that products which are supposed to be standards compliant may in fact be compliant only with the 'hijacked' standard and not with the original, 'open' standard. This situation was at issue in a dispute between Sun Microsystems and Microsoft over the Sun-developed Java platform standard: see, eg, Justice Motz's summary of the dispute at *In re Microsoft Corp Antitrust Litig*, 232 F Supp 2d 534 (D Md, 2002); see also *In re Microsoft Corp Antitrust Litig* 333 F3d 517 (4th Cir, 2003).

¹² IP2 Report, above n 3, p 35; G F Masoudi, US Department of Justice, 'Antitrust Enforcement and Standard Setting: The VITA and IEEE Letters and the "IP2" Report', speech delivered at the Spring Meeting of the American Intellectual Property Law Associations, Boston, Massachusetts, 10 May 2007, at <<http://www.usdoj.gov/atr/public/speeches/223363.htm>> (accessed 26 September 2009); G F Masoudi, US Department of Justice, 'Efficiency in Analysis of Antitrust, Standard Setting, and Intellectual Property', speech delivered at the High-Level Workshop on Standardization, IP Licensing, and Antitrust, Tilburg Law & Economic Center, Tilburg University, Brussels, Belgium, 18 January 2007, at <www.usdoj.gov/atr/public/speeches/220972.pdf> (accessed 26 September 2009).

¹³ Ibid; see also J Farrell, J Hayes, C Shapiro and T Sullivan, 'Standard Setting, Patents, and Hold Up' (2007) 74(3) *Antitrust LJ* 603 at 612, 616.

¹⁴ Masoudi, 'Efficiency in Analysis of Antitrust', above n 12. Joseph Farrell, John Hayes, Carl Shapiro and Theresa Sullivan state that even the *prospect* of hold-up can create economic harm, because it can induce users to postpone or avoid making commitments, or to make inefficient investments to partially protect themselves from possible hold-up: above n 13, at 612, 615.

¹⁵ R Bekkers, B Verspagen and J Smits, 'Intellectual property rights and standardization: the case of GSM' (2002) 26 *Telecommunications Policy* 171 at 173.

'Standardization bodies would prefer to draw up standards that have little or no essential [patent rights], but in practice, they may not have much choice'.¹⁶

Exploitation of patent rights is not anti-competitive in itself; IP protection provides incentives deemed necessary to invest in the development of technology.¹⁷ Patent ambush, therefore, does not occur by virtue of a patent owner charging a particular royalty rate when licensees would prefer to pay a lower rate.¹⁸ Rather, patent ambush occurs when the actions of a patent owner preclude a SSO from pursuing a meaningful competitive alternative to the patented technology.¹⁹ In other words, patent ambush deprives the SSO of the opportunity — if the SSO members had known of the patent owner's demands prior to setting the standard — of choosing an alternative technology or of securing a competitive royalty rate in exchange for the inclusion of the patented technology in the standard.²⁰ Because these windfall profits of patent owners after a successful ambush are attributable more to the high switching costs in renegotiating the standard than the value of the patented invention itself, they are likely to over-reward patent owners and suppress production and downstream innovation by raising supply costs and reducing margins of downstream manufacturers.²¹

II Patent ambush: competition law constraints on patent owners

This article addresses the potential constraints on patent ambush imposed by s 46 of the TPA. Patent ambush generally occurs in one of two ways.²² The first is where a member of an SSO fails to disclose essential patents held by the member prior to the standard being set, allowing the patent holder to gain

¹⁶ Ibid.

¹⁷ Despite their apparently differing objectives, IP law and competition law are generally understood to be complementary, as IPRs are considered to promote dynamic efficiency. As stated in the *Review of intellectual property legislation under the Competition Principles Agreement*, 'The intellectual property system serves to promote innovation, which is a key form of competition': Intellectual Property and Competition Review Committee, *Review of intellectual property legislation under the Competition Principles Agreement*, Final Report, 2000, p 6, at <<http://www.ipaustralia.gov.au/about/ipcr.shtml>> (accessed 26 September 2009). See, however, C Lawson, 'Patent privileges and the National Competition Policy — patent scope and allocation?' (2005) 33(1) *ABLR* 7 (arguing that the proper scope of patent protection and the impact on competition has been under-analysed). See further Justice K Lindgren, 'The interface between intellectual property and antitrust: some current issues in Australia' (2005) 16(2) *AIPJ* 76; J Nielsen, 'Innovation in medical biotechnology: Mapping the intersection of intellectual property and competition law' (2007) 35(6) *ABLR* 407; Justice R Sackville, 'Monopoly versus freedom of ideas: The expansion of intellectual property' (2005) 16(2) *AIPJ* 65 at 74–5; R Wright and J Baird, 'The intersection of competition and intellectual property law and the "new economy"' (2008) 16 *CCLJ* 143.

¹⁸ Masoudi, 'Antitrust Enforcement and Standard Setting', above n 12.

¹⁹ Ibid.

²⁰ Ibid.

²¹ See M A Lemley and C Shapiro, 'Patent Holdup and Royalty Stacking' (2007) 85 *Texas LRev* 1991; J Hillel, 'Standards × Patents ÷ Antitrust = ∞: The inadequacy of antitrust to address patent ambush' [2010] *Duke Law & Technology Review* 17.

²² See Hillel, above n 21.

significantly more market share and power.²³ The second occurs where a patent holder reneges on its promise to license its essential patent rights on RAND terms, seeking to rely on inclusion in the standard in order to exclude competitors from the market or extract higher than normal royalty rates.²⁴

A Failure to disclose patent interests

By not disclosing patents they currently hold or that are pending during the standards-setting process, members can significantly increase their market share and the value of their patent portfolio. Once a standard has been widely adopted in the market, the owner of an essential patent can then reveal their patent interests and, relying on increased switching costs and standards lock-in, extract much higher licensing fees than would otherwise be possible.²⁵ In an attempt to avoid this form of patent ambush, many SSOs have adopted IP policies that require members to disclose any patent interests that may be essential to the standard being developed.²⁶ For example, the ISO/IEC/ITU Common Patent Policy (which has been adopted, in large part, by Standards Australia)²⁷ provides:

any party participating in the work of ITU, ISO or IEC should, from the outset, draw the attention of the Director of ITU-TSB, the Director of ITU-BR, or the offices of the CEOs of ISO or IEC, respectively, to any known patent or to any known pending patent application, either their own or of other organizations, although ITU, ISO or IEC are unable to verify the validity of any such information.²⁸

This part considers what, if any, competition law liability may arise where a member ignores a similar disclosure requirement and later attempts to assert their patent rights after the standard has been adopted.

i) The US position: *Rambus v FTC*

This situation recently arose in the US case *Rambus Inc v Federal Trade Commission (FTC)*.²⁹ Rambus filed patent applications over dynamic random access memory (DRAM) architecture in 1990 and, while developing its patent

23 See, eg, *Rambus Inc v FTC* 522 F 3d 456 (DC Cir, 2008), *cert denied*, No 08-694, 2009 WL 425102 (23 February 2009).

24 See, eg, *Broadcom Corp v Qualcomm, Inc* 501 F 3d 297 (3d Cir, 2007).

25 See, eg, P Staniszewski, 'The interplay between IP rights and competition law in the context of standardization' (2007) 2(10) *Jnl of Intellectual Property Law & Practice* 666 at 670.

26 Presumably due to a lack of resources and the great difficulty of identifying all potentially applicable patent rights, most SSOs do not conduct patent searches for any IPRs that may be affected by the proposed standard. Additionally, very few SSOs require a member to search its own files or the broader literature to identify relevant IPRs: see Lemley, above n 4, at 1905, 1961.

27 See the Standards Australia guide, Standards and Other Publications (SG-003), p 12, at <<http://www.standards.org.au/cat.asp?catid=8>> (accessed 2 March 2010).

28 International Organization for Standardization (ISO)/International Electrotechnical Commission (IEC)/International Telecommunications Union (ITU) Common Patent Policy, Clause 1, at <http://isotc.iso.org/livelink/livelink/fetch/2000/2122/3770791/Common_Policy.htm> (accessed 2 March 2010).

29 *Rambus Inc v FTC* 522 F 3d 456 (DC Cir, 2008), *cert denied*, No 08-694, 2009 WL 425102 (23 February 2009). R A Skitol and K M Vorrasi write, 'The DC Circuit's *Rambus* decision is now the more definitive appellate jurisprudence on the application of the Sherman Act to standards-related patent holdup conduct and will remain as the most influential ruling on this

portfolio, participated in the activities of a SSO, the Joint Electron Device Engineering Council (JEDEC), which was working on a standard for DRAM technologies. In 1993, JEDEC approved the synchronous DRAM (SDRAM) standard, which included two technologies over which Rambus held patent rights. JEDEC then began working on an advanced SDRAM and Rambus eventually formally withdrew from JEDEC. At no point did Rambus disclose its patent interests, despite the fact that JEDEC had a patent policy that required all members and participants to disclose any issued or pending patents they held over technology under consideration for adoption.³⁰ Indeed, it appeared that Rambus had repeatedly amended its pending patent claims to cover the standards under consideration by JEDEC. In 1998, JEDEC adopted the DDR SDRAM standard, which included four of Rambus's patented technologies. In 1999, once the standards had become widely adopted, Rambus revealed its patent rights over technologies included in the SDRAM and DDR SDRAM standards and demanded licences. In June 2002, the FTC filed a complaint.³¹

In 2006, the FTC found Rambus liable under § 2 of the Sherman Act (US) for failing to disclose pending patent applications to members of a SSO, as part of an alleged course of conduct intended to monopolise markets for computer memory technologies included in the standard.³² Section 2 of the Sherman Act prohibits attempts to gain a monopoly through anti-competitive conduct.³³ The FTC found that 'but for Rambus's deceptive course of conduct, JEDEC either would have excluded Rambus's patented technologies from the JEDEC DRAM standards, or would have demanded RAND assurances, with

subject for some years to come.': R A Skitol and K M Vorrasi, 'Patent Holdup in Standards Development: Life After *Rambus v FTC*' (2009) 23(3) *Antitrust* 26 at 26.

30 Note, however, that the FTC stated that the JEDEC patent policy was 'not a model of clarity . . .': *In the Matter of Rambus Inc*, FTC Docket 9302, Opinion of the Commission (2 August 2006), 52–6.

31 See *Rambus Inc v FTC* 522 F 3d 456 (DC Cir, 2008) at 459–61 per Senior Circuit Judge Williams. See also C B Hockett and R G Lipscomb, 'Best FRANDS Forever? Standard-Setting Antitrust Enforcement in the United States and the European Union' (2009) 23(3) *Antitrust* 19 at 20; Skitol and Vorrasi, above n 29, at 26–7; D Dunlavey and M Schallop, 'Lessons from *Rambus* — Play by the Rules in Standards Setting Organizations' (2007) *Intellectual Property Today* 33; Nimmer, above n 4, at 29–32. For further examples of non-disclosure of patent interests in standard-setting, see Federal Trade Commission, 'Dell Computer Settles FTC Charges; Won't Enforce Patent Rights for Widely Used Computer Feature', Media Release, 2 November 1995, at <<http://www.ftc.gov/opa/1995/11/dell.shtm>> (accessed 23 March 2010); *Dell Computer Corp* 121 FTC 616, 1996, at <<http://www.ftc.gov/os/1999/08/9823563c3888dell.htm>> (accessed 23 March 2010); *Union Oil Company of California* FTC Docket No 9305, <<http://www.ftc.gov/os/adjpro/d9305/index.shtm>> (accessed 23 March 2010).

32 See *In the Matter of Rambus Inc*, FTC Docket 9302, Opinion of the Commission (2 August 2006) at 3; see also Dunlavey and Schallop, above n 31, at 34; Hockett and Lipscomb, above n 31, at 20. Mark Lemley states that in the context of non-disclosure of patent rights to a standard setting body, three elements must be proven to establish § 2 liability: (1) the plaintiff must establish that the SSO would not have adopted the standard in question but for the defendant's misrepresentation or omission; (2) the SSO's decision to adopt the standard must influence the market; and (3) the plaintiff should be able to show that the defendant's failure to disclose its relevant patent rights was intentional and not an oversight: Lemley, above n 4, at 1931–5.

33 Sherman Antitrust Act 1890 (US) 15 USC § 2.

an opportunity for ex ante licensing negotiations'.³⁴

On appeal, the DC Circuit reversed the FTC's finding, holding that Rambus could only be held liable if, but for Rambus's conduct, JEDEC would have selected alternative technologies for the standards. Rambus could not be held liable if JEDEC would have still adopted Rambus's technologies but would have sought RAND licensing commitments. Senior Circuit Judge Williams, in delivering the opinion of the court, stated:

Under this hypothetical, JEDEC lost only an opportunity to secure a RAND commitment from Rambus. But loss of such a commitment is not a harm to competition from alternative technologies in the relevant markets. Indeed, had JEDEC limited Rambus to reasonable royalties and required it to provide licenses on a non-discriminatory basis, we would expect *less* competition from alternative technologies, not more; high prices and constrained output tend to attract competitors, not to repel them.³⁵

The DC Circuit was not convinced by the FTC's evidence and held that the FTC could not prove that JEDEC would have chosen alternative technologies in the absence of the alleged deception. Therefore, Rambus could not be held liable under § 2 of the Sherman Act.³⁶

This decision seems somewhat problematic. While high prices may attract competition in general, the existence of an established industry standard that requires the use of particular patented technology imposes high costs on those who would use competing technology. The ability of a patent owner to subvert a standard-setting process and capture the standard is likely to significantly decrease technological competition during the development of the standard.³⁷ Particularly where the patented technology is just one component of a standard, seeking an alternative solution to the entire standard may be prohibitively expensive. As long as interoperability is important — that is, as long as the standard itself is important — then competition is likely to be harmed when a standard is captured and manufacturers are unable to

³⁴ *In the Matter of Rambus Inc*, FTC Docket 9302, Opinion of the Commission (2 August 2006) at 177; see also Skitol and Vorrasi, above n 29, at 27. The FTC further stated that 'when the firm engages in exclusionary conduct that subverts the standard-setting process and leads to the acquisition of monopoly power, the pro-competitive benefits of standard-setting cannot be fully realised': *In the Matter of Rambus Inc*, FTC Docket 9302, Opinion of the Commission (2 August 2006) at 118; see also Dunlavy and Schallop, above n 31, at 34.

³⁵ *Rambus Inc v FTC* 522 F 3d 456 (DC Cir, 2008), *cert denied*, No 08-694, 2009 WL 425102 (23 February 2009) at 466. Note that the position is considerably different under EU law, where loss of a RAND or similar commitment is more likely to be considered anti-competitive (provided the necessary circumstance exists to satisfy conditions under EU law): see, eg, Hockett and Lipscomb, above n 31, at 23; Lea and Hall, above n 2.

³⁶ *Rambus Inc v FTC* 522 F 3d 456 (DC Cir, 2008), *cert denied*, No 08-694, 2009 WL 425102 (23 February 2009) at 466. See also Hockett and Lipscomb, above n 31, at 20. The court further held that deceptive conduct must have an anti-competitive effect in order to form the basis of a monopolisation claim. The court stated at 464:

Even if deception raises the price secured by the seller, but does so without harming competition, it is beyond the antitrust laws' reach . . . An otherwise lawful monopolist's use of deception simply to obtain higher prices normally has no particular tendency to exclude rivals and thus to diminish competition.

³⁷ See D Alban, '*Rambus v Infineon*: Patent Disclosures in Standard-Setting Organizations' (2004) 19(1) *Berkeley Technology LJ* 309 at 329.

implement it without paying higher than expected royalties. As noted above, these higher royalties reflect not the value of the patented technology but the high switching costs of renegotiating a new standard and retooling existing manufacturing processes.³⁸ This form of patent ambush can accordingly suppress competition between technologies within the standard and decrease total production by downstream manufacturers.

ii) The Australian position: s 46(1) of the TPA

The *Rambus* case demonstrates the difficulty of establishing an antitrust action in the United States for non-disclosure of IPRs in contravention of a SSO's IP policy.³⁹ Under Australian law, however, an action against a patent holder would be even more difficult to establish because of the functional restraints of s 46(1) of the TPA. Unlike § 2 of the Sherman Act, s 46(1) of the TPA does not prohibit attempts to *gain* monopoly power. Section 46(1) of the TPA will only catch conduct engaged in where the corporation *already* has substantial market power. Where a corporation has obtained substantial market power as a result of its technologies being included in a standard, then any conduct engaged in before the market power is acquired — including failure to disclose relevant IPRs in violation of the SSO's IP policy — will not be caught by s 46(1) of the TPA.⁴⁰ On the facts in *Rambus*, since Rambus's conduct was designed to gain monopoly power, it is doubtful that Rambus would have had substantial market power before the ratification of the applicable standards and it would therefore not likely be liable under s 46(1) if the conduct occurred in Australia.

The lack of an appropriate prohibition in competition law for the non-disclosure and subsequent capture of a standard suggests that other private law doctrines may provide a more appropriate method of restraining patent hold up.⁴¹ For example, s 52 of the TPA (under Pt V) may be effective

38 See M A Lemley and C Shapiro, 'Patent Holdup and Royalty Stacking' (2007) 85 *Texas Law Rev* 1991; Hillel, above n 21.

39 For other relevant US case law on non-disclosure, see actions brought before the Federal Trade Commission: *In the Matter of Dell Computer Corp* 121 FTC 616 (1996), and *In the Matter of Union Oil Co of Cal* No 9305, FTC, 27 July 2005. Increasingly, the FTC is bringing actions under § 5 of the Federal Trade Commission Act (the FTC Act) instead of § 2 of the Sherman Act. One reason for this is that § 5 allows the FTC to pursue companies that act anti-competitively but whose actions fall short of a Sherman Act violation. Section 5 affords no private right of action. Instead, actions brought under § 5 are 'often brought in the form of administrative actions that result in cease and desist orders or disgorgement of profits. [Section 5 actions] do not lead to the mandatory trebling of damages required by the Sherman Act': J Hakala, 'Follow On State Actions Based on the FTC's Enforcement of Section 5', 2008, unpublished, pp 1–2, at <http://works.bepress.com/justin_hakala/1/> (accessed 2 May 2010). For an example of a standard setting case brought under § 5 of the FTC Act rather than § 2 of the Sherman Act, see *In the Matter of Negotiated Data Solutions LLC* FTC File No 051-0094, 23 September 2008, at <<http://www.ftc.gov/os/caselist/0510094/>>.

40 Where a corporation only acquires market power via the standard-setting process, it may face liability under s 46(1) if it takes advantage of the market power acquired after the standard is widely adopted, to the detriment of consumers. This may occur where, for example, the corporation leverages its market power into other markets.

41 See Lea and Hall, above n 2, at 87; D Lichtman, 'Patent Holdouts in the Standard Setting Process' *IP Central Academic Advisory Council Bulletin*, 2006, p 8, from SSRN at <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=902646> (accessed 3 October 2009);

in prohibiting misleading and deceptive conduct where the patent holder has remained silent in the face of a reasonable expectation of disclosure of patent interests. Alternatively, a patent owner who has induced manufacturers to adopt a standard on the understanding that the relevant technology is not encumbered may be estopped from later asserting patent rights and demanding licence fees. Most likely, SSOs will continue to attempt to impose contractual requirements of disclosure on participants in order to provide a more certain and more tailored framework for standard-setting. As we will see below, however, these contractual agreements may themselves be vulnerable to attack from competition law prohibitions on cartel behaviour. Before turning to examine the legality of private agreements, we will first address the more active role of competition law in restraining attempts to restrict competition after a standard has been captured.

B Discriminatory licensing and refusal to license

Where a patent owner has successfully captured an industry standard, it will usually have much more bargaining power and an increased ability to set the terms on which manufacturers can licence its technology and create standards-compliant devices. There are two main competition issues that may arise once a patent owner has control of a standard: first, the patent owner may impose licence terms that are prohibitive in order to block new market entrants in the downstream market for devices that embody the patented technology. Second, the patent owner may demand royalty rates far in excess of the rates it would normally be able to command, and potentially far in excess of applicable royalties for comparably important components of the standard where alternative technologies may exist or where those rates are limited by *ex ante* agreements.

An interesting example is found in the 1999 US case of *Ess Tech v Pc-Tel, Inc.*⁴² where ESS alleged that PC-Tel held patents necessary to produce standards-compliant modem chipsets and refused to license on terms that were reasonable for new manufacturers to enter the market. The District Court dismissed ESS's antitrust claims on summary judgment on the basis that while ESS had alleged harm to itself, it had not sufficiently demonstrated harm to competition by showing that consumers would be adversely affected.⁴³ Nevertheless, this example raises an interesting question as to whether the owner of a patent incorporated in a standard could be liable for refusing to license the patent to one or more of its competitors under Australian law.

Another example comes from CSIRO's patent over an essential component of the IEEE 802.11 wireless standards. CSIRO had agreed to licence its technology on RAND terms before the IEEE ratified the 802.11a standard in

Lemley, above n 4; M A Lemley, 'Ten Things to Do about Patent Holdup of Standards (and One Not To)' (2007) 48 *Boston College L Rev* 149; P D G Sabido, 'Defending Against Patent Infringement Suits in Standard-Setting Organizations: *Rambus Inc v Infineon Technologies AG*' (2003) 13 *Federal Circuit Bar Jnl* 635; J D Wright, 'Why the Supreme Court Was Correct to Deny Certiorari in *FTC v Rambus*' (2009) 09 *George Mason Law & Economics Research Paper* 14, at <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1349969>.

42 1999 US Dist LEXIS 23227, No C-99-20292, ND Cal 2 November 1999.

43 *Ibid.*, at 7-8.

1999.⁴⁴ When companies adopting the standard refused CSIRO's license terms, CSIRO eventually brought a test case in the United States against Buffalo Tech. After winning summary judgment on the substantive issues of patent validity and infringement,⁴⁵ CSIRO sought a permanent injunction to prevent Buffalo from working the patent.⁴⁶ The District Court granted the injunction, holding that CSIRO would suffer irreparable harm to its reputation and that monetary royalties alone would not adequately address non-monetary terms that CSIRO might seek in a patent licence.⁴⁷ Over the same period, a group of computer hardware manufacturers resisted CSIRO's licensing negotiations, which they alleged imposed unreasonably high royalty rates,⁴⁸ but eventually settled on undisclosed terms.⁴⁹ While CSIRO now continues to offer licences on non-discriminatory terms, there are interesting questions about the power of non-manufacturing patent owners to control manufacture and the ability of patent owners with control of an industry standard to demand potentially inefficiently high royalty rates.⁵⁰

This section examines whether and in what circumstances the licensing practices of patent owners who have control over an industry standard could give rise to liability under s 46(1) of the TPA, which prohibits the misuse of market power in order to stifle competition.⁵¹ There are three primary elements that must be established in making out a s 46(1) action: first, the corporation must have substantial market power; second, the corporation must take advantage of that market power (there must be a causal connection);⁵²

44 *CSIRO v Buffalo Tech Inc* 492 F Supp 2d 600 (ED Tex, 2007) at 602.

45 *CSIRO v Buffalo Tech Inc* 2006 US Dist LEXIS 82834 (ED Tex, 2006).

46 *CSIRO v Buffalo Tech Inc* 492 F Supp 2d 600 (ED Tex, 2007).

47 *Ibid*, at 606.

48 When CSIRO demanded royalties of \$4.00 per unit, the computer companies alleged that this was unrealistic given that wireless adapters retailed for approximately \$40.00 per unit: see B A Wagar, 'Intel Corp v Commonwealth Scientific & Industrial Research Organisation: Can Equity Step in Where Public Standards and the Patent System Seem at Odds' (2007) 47 *Jurimetrics* 429 at 431.

49 K Edwards, 'CSIRO settles wireless battle,' *Computerworld*, 22 April 2009.

50 See J Hruska, 'Dark Australian patent cloud looms over 802.11n spec', *Ars Technica*, 24 September 2007, <<http://arstechnica.com/old/content/2007/09/dark-australian-patent-cloud-looms-over-802-11n-spec.ars>> (accessed 13 November 2010) (arguing that CSIRO royalty rates for its 802.11 patent 'were far above the industry average' and unsustainable in the high-volume low-margin market for wireless products); see also M A Lemley and C Shapiro, 'Patent Holdup and Royalty Stacking' (2007) 85 *Texas L Rev* 1991 (discussing the threat that the prospect of injunctive relief poses for efficient licensing negotiations).

51 In *NT Power*, the High Court recognised, obiter, that refusal to license IPRs could give rise to liability under s 46(1) of the TPA: *NT Power Generation v Power & Water Authority* (2004) 219 CLR 90; 210 ALR 312; [2004] HCA 48; BC200406480 at [85]. See also J Nielsen, 'Biomedical innovation: How compulsory is competition?' (2010) 38(2) *ABLR* 100 at 102. The competitive consequences of a refusal to license IP have been considered under US antitrust law and European (EC) competition law to a greater extent than they have been considered under Australian law. See, eg, *Eastman Kodak Co v Image Technical Services Inc* 504 US 451 (1992); *In re Independent Service Organizations Antitrust Litigation* 203 F 3d 1322 (Fed Cir, 2000); 'the Magill case' Joined Cases C-241/91 P and C-242/91 P, *RTE and ITP v EC Commission* [1995] ECR I-743; *IMS Health v NDC Health* Case C-418/01 (2004); Case COMP/C-3/37.792 *EC Commission v Microsoft*; and *Apple Computer Inc* Conseil de la Concurrence, Decision No 04-D-54, 9 November 2004. See further IP2 Report, above n 3, Ch 1, pp 16–20.

52 The High Court in the *Melway* case held that 'it may be proper to conclude that a firm is

and third, the corporation must have the subjective purpose of limiting competition. Similarly to the case in *Ess Tech*, a plaintiff who alleges that a patent owner has refused to license an essential technology must show that there has been harm to competition, not merely to the 'private interests of particular persons or corporations'.⁵³ Thus, an action under s 46(1) is only likely to succeed where the conduct of the corporation will harm consumers.⁵⁴ Importantly, s 51(3) of the TPA, which provides a partial exemption for intellectual property rights, does not operate with respect to s 46.

i) Substantial market power

'Market power' and 'substantial market power' are not defined in the TPA, however there must be a significant or considerable degree of market power before the 'substantial market power' threshold is satisfied. In the *Queensland Wire* case, 'market power' was defined as 'the ability of a firm to raise prices above the supply cost without rivals taking away customers in due time, supply cost being the minimum cost an efficient firm would incur in producing the product'.⁵⁵ The court noted that in determining the *degree* of market power, there are various indicators which courts have traditionally considered, including market share, barriers to entry in the relevant market, and vertical integration.⁵⁶ While it is not possible to come to any definitive general conclusion, it is certainly possible that inclusion of an essential patented technology in a widely adopted standard could confer substantial market power on the patent owner. Much will depend on the identification of the relevant market; if the market is narrowly defined to include licences for the patented technology and its functional equivalents, then a patent owner who has captured a standard which has been widely adopted will be more likely to possess substantial market power because no close substitutes will be available.⁵⁷ In such a scenario, the patent owner could raise prices above the

taking advantage of market power where it does something that is materially facilitated by the existence of the power, even though it may not have been absolutely impossible without the power': *Melway Publishing Pty Ltd v Robert Hicks Pty Ltd (t/as Auto Fashions Australia)* (2001) 205 CLR 1; 178 ALR 253; [2001] HCA 13; BC200100872 at [51]. See also s 46(6A) of the TPA, which sets out the factors that a court may have regard to in determining whether a corporation has taken advantage of its substantial degree of power in a market. These factors set down a broader test than that considered in the case law (potentially allowing a more tenuous connection between the conduct concerned and the market power).

53 *Melway Publishing Pty Ltd v Robert Hicks Pty Ltd (t/as Auto Fashions Australia)* (2001) 205 CLR 1; 178 ALR 253; [2001] HCA 13; BC200100872 at [17] per Gleeson CJ, Gummow, Hayne and Callinan JJ; *Boral Besser Masonry Ltd (now Boral Masonry Ltd) v ACCC* (2003) 215 CLR 374; 195 ALR 609; [2003] HCA 5; BC200300131 at [87] per Gleeson CJ and Callinan J.

54 *Boral Besser Masonry Ltd (now Boral Masonry Ltd) v ACCC* (2003) 215 CLR 374; 195 ALR 609; [2003] HCA 5; BC200300131 at [260]–[261] per McHugh J; see also *Queensland Wire Industries Pty Ltd v Broken Hill Pty Co Ltd* (1989) 167 CLR 177 at 191 per Mason CJ and Wilson J; 83 ALR 577; 63 ALJR 181; (1989) ATPR 40-925.

55 *Ibid.*, at CLR 188 per Mason CJ and Wilson J.

56 *Ibid.*

57 See J Nielsen, 'Biomedical innovation: How compulsory is competition?' (2010) 38(2) *ABLR* 100 at 109 (arguing that 'patents will not constitute barriers to entry if downstream users have the ability to invent around, modify research direction, or obtain alternative technologies'.); see also D Clapperton and S Coronas, 'Locking in Customers, Locking out

supply cost and manufacturers who wanted to produce standards-compliant products would not be able to source a legitimate replacement for the patented component. The manufacturer may be able to pass on the increased costs to consumers, or, if the price increase is not borne by its competitors, may have to absorb the increase. As long as the total increase is not prohibitively expensive and is lower than the high costs of renegotiating a new standard, manufacturers will be effectively locked-in to the standard.

It is likely that a patent owner will only have substantial market power in the most exceptional circumstances⁵⁸ — perhaps only in the most widely adopted standards where negotiation and adoption of alternative technologies is prohibitively difficult. CSIRO, for example, may have substantial market power over the market for wireless local area networking technologies. Interoperability of wireless products is extremely important because devices (especially mobile devices) must be able to work in a large range of environments and connect to other products by a variety of manufacturers. Since the 802.11 standards have been so widely adopted, the costs of negotiating and adopting a new standard with comparable compatibility is likely to be prohibitively expensive. Because CSIRO's patent gives it a significant ability to set royalty fees and licence terms and there is a large barrier to entry for non-standards compliant devices, it could conceivably have substantial market power.

ii) Misuse of market power: refusal to license and the essential facilities doctrine

There may be some cases where the owner of patented technology included in a standard will refuse to license that technology to parties wanting to adopt the standard. This situation may occur where a patent owner who has secured a standard wishes to ensure that one or more competitors are not able to create standards-compliant devices. For example, in *ESS v PC-Tel*, ESS alleged that after PC-Tel acquired the firm that developed the patent, it ceased good faith licence negotiations and 'started demanding increasingly unreasonable and discriminatory terms'.⁵⁹ ESS complained that it could not acquire the rights it needed to enter the market and compete with existing market participants. Refusing to license a patent that covers technology mandated under a standard could prevent a potential competitor from not only using the particular patented technology, but from manufacturing an entire range of standards-compliant devices. If the patent owner has substantial market power, we must examine whether a refusal to licence could constitute 'taking advantage' of that power. For s 46(1) liability to arise, there must be a connection between the conduct in question and the market power such that it can be said that the conduct involved a use of the market power.⁶⁰

Competitors: Anti-Circumvention Laws in Australia and Their Potential Effect on Competition in High Technology Markets' (2006) 30 *MULR* 657 at 701–4.

58 Nielsen, above n 57, at 111 (arguing that 'few patent claims are likely to be broad enough to encompass an antitrust market').

59 *Ess Tech v Pc-Tel, Inc* 1999 US Dist LEXIS 23227, p 3, No C-99-20292, ND Cal Nov 2, 1999.

60 *Melway Publishing Pty Ltd v Robert Hicks Pty Ltd (t/as Auto Fashions Australia)* (2001) 205 CLR 1; 178 ALR 253; [2001] HCA 13; BC200100872 at [51]; *ACCC v Australian*

Where a patent owner is vertically integrated and refuses to license its patented technology in order to increase its penetration of downstream markets, an analysis of the 'taking advantage' element of s 46(1) may be similar to that involving leveraging under the essential facilities doctrine.⁶¹ Patent rights can be regarded as essential facilities if access to them is indispensable to allow competitors to compete in upstream or downstream markets.⁶² Leveraging occurs where a corporation with power in one market uses that power in another market.⁶³ In these circumstances, it will be necessary to demonstrate that there are two markets: one in which the patent right is a source of substantial market power and a separate market for a new product that requires a patent licence.⁶⁴

For example, in *Queensland Wire*, BHP had substantial market power in the market for the supply of an essential raw material (Y-bar).⁶⁵ Y-bar was used to make star picket fence posts in a downstream market for rural fencing. BHP's refusal to supply Y-bar was found to be a form of leveraging rather than a mere refusal to supply. The court held that a mere refusal to supply would not be characterised as a 'taking advantage' of market power, because a firm without market power could choose not to supply a new customer. The High Court found, however, that BHP refused to make available an essential raw material in the upstream market for steel products in order to preserve BHP's monopoly in the downstream market for rural fencing products. This meant that BHP's conduct was dependent on its market power in the upstream market.⁶⁶

In the *NT Power* case,⁶⁷ the Power and Water Authority (PAWA) in the Northern Territory operated a vertically integrated electricity enterprise including power generation, transmission, and retail components.⁶⁸ NT Power Generation Pty Ltd wanted to sell electricity to retail customers in Katherine

Safeway Stores Pty Ltd (2003) 129 FCR 339; 198 ALR 657; [2003] FCAFC 149; BC200303400 at [333] per Heerey and Sackville JJ.

61 The concept of 'essential facility' embraces both the natural monopoly (a monopoly resulting from economies of scale) and the bottleneck concepts. The essential facilities doctrine is well established in the United States: see, eg, *Associated Press v United States* 326 US 1 (1945); *Alaska Airlines v US* 948 F 2d 536 (9th Cir, 1991); *Otter Tail Power Co v United States* 410 US 366 (1973); *Verizon Communications Inc v Law Offices of Trinko* 540 US 682 (2004). The doctrine has also been considered under EC competition law: see, eg, *Oscar Bronner v Mediaprint* [1998] ECR 7791; *Apple Computer Inc* Case No 04-D-54, Conseil de la Concurrence, 2004.

62 See S G Coronés, *Competition Law in Australia*, 5th ed, Lawbook Co, Sydney, 2010, p 520.

63 See, eg, *ACCC v Baxter Healthcare Pty Ltd* [2005] ATPR 42-066; [2005] FCA 581; BC200504213; *Melway Publishing Pty Ltd v Robert Hicks Pty Ltd (t/as Auto Fashions Australia)* (2001) 205 CLR 1; 178 ALR 253; [2001] HCA 13; BC200100872; *Rural Press Ltd v ACCC* (2003) 216 CLR 53; 203 ALR 217; [2003] HCA 75; BC200307578; *ACCC v Australian Safeway Stores Pty Ltd* (2003) 129 FCR 339; 198 ALR 657; [2003] FCAFC 149; BC200303400.

64 See Coronés, above n 62, p 526.

65 *Queensland Wire Industries Pty Ltd v Broken Hill Pty Co Ltd* (1989) 167 CLR 177; 83 ALR 577; 63 ALJR 181; ATPR 40-925.

66 See *ibid*, at CLR 193.

67 *NT Power Generation v Power & Water Authority* (2004) 219 CLR 90; 210 ALR 312; [2004] HCA 48; BC200406480.

68 See S Coronés, 'Section 46 of the Trade Practices Act as an alternative access regime' (2005) 33 *ABLR* 150 at 150.

and Darwin in competition with PAWA and wanted to transport electricity along PAWA's infrastructure. PAWA refused NT Power access to PAWA's infrastructure. The High Court held that PAWA had contravened s 46:

PAWA did take advantage of market power, because it was only by virtue of its control of the market or markets for the supply of services for the transport of electricity along its infrastructure, including its transmission and distribution network, and the absence of other suppliers, that PAWA could in a commercial sense withhold access to its infrastructure; if PAWA had been operating in a competitive market for the supply of access services, it would be very unlikely that it would have been able to stand by and allow a competitor to supply access services.⁶⁹

The High Court in the *NT Power* case confirmed that s 46 can be used as a de facto essential facilities doctrine to compel the owner of an essential facility to grant access to it.⁷⁰ Where a patent holder uses its monopoly power in one market (the market for the technology over which the patent is held) to influence another market (downstream markets for products or services that require adoption of the standard and therefore a license for the patented technology), the patent holder may be in contravention of s 46(1) of the TPA. In order to sustain an action under s 46(1), however, merely showing that the patent owner holds market power and has refused to license will not be sufficient; there must be a connection between the refusal to license and the substantial market power.⁷¹ The newly inserted s 46(6A) of the TPA codifies, for the most part,⁷² the common law 'taking advantage' tests, providing that the court may have regard to:

- (a) whether the conduct was materially facilitated by the corporation's substantial market power;
- (b) whether the corporation engaged in the conduct in reliance on its substantial market power;
- (c) whether it is likely that the corporation would have engaged in the conduct if it did not have a substantial degree of market power; and
- (d) whether the conduct is otherwise related to the corporation's substantial market power.

Before s 46(6A) was introduced in 2008, the courts developed a counterfactual test to determine whether a corporation had 'taken advantage' of market power: a corporation will not be deemed to have taken advantage of market power if it acts in a way that it would or could have acted in a competitive market.⁷³ On this view, it seems reasonable to suggest that a

69 *NT Power Generation v Power & Water Authority* (2004) 219 CLR 90; 210 ALR 312; [2004] HCA 48; BC200406480 at [124].

70 *Ibid*, at [85]; see also *Corones*, above n 68, at 154.

71 *Melway Publishing Pty Ltd v Robert Hicks Pty Ltd* (2001) 205 CLR 1; 178 ALR 253; [2001] HCA 13; BC200100872, at [67] ('it does not follow that because a firm in fact enjoys freedom from competitive constraint, and in fact refuses to supply a particular person, there is a relevant connection between the freedom and the refusal').

72 See S *Corones*, 'Sections 46(1) and 46(1AA) of the TPA: The struggle of the small against the large' (2009) 37 *ABLR* 110 (explaining that while it may be technically open for a court to broaden the 'taking advantage' test to focus more on fairness and the protection of small businesses, courts are likely to nonetheless continue to interpret the test as under the historical caselaw).

73 See *Queensland Wire Industries Pty Ltd v Broken Hill Proprietary Co Ltd* (1989) 167 CLR

patent owner like PC-Tel would not have been able to price a manufacturer like ESS out of the market if it did not hold a patent monopoly on an essential component of a widely adopted standard. In a competitive market where alternate standards-compliant solutions are available, a patent owner would have no incentive to raise prices to such an extent that it drove manufacturers to competing suppliers. Alternatively, if other functionally equivalent but non-compliant technologies were available, a patent owner would have a substantial incentive to license broadly in order to increase adoption of the particular standard it supports.⁷⁴

Determining whether a patent owner has taken advantage of their market power is highly fact-specific and will depend on the circumstances of the particular case. In circumstances like those in *ESS v PC-Tel*, a court may find that the owner of an essential patent would not have been able to refuse to license new entrants to the market if there were alternatives to its patented technology. Such a refusal would merely drive the manufacturers to a competitor and provide no commercial benefit. If this were the case, the patent owner could only rationally refuse to license by taking advantage of its market power. This counterfactual test, however, is exceedingly difficult to satisfy in practice.⁷⁵ It may be somewhat easier to establish in the case of a vertically integrated patent owner, but it could also conceivably be established in a single-market scenario.⁷⁶ For example, if a non-practising entity (like CSIRO)⁷⁷ were to refuse licences to a particular downstream manufacturer in a manner designed to increase royalty profits by suppressing downstream competition, it could also potentially be deemed to have impermissibly taken advantage of its market power.⁷⁸ In either case, the taking advantage test will likely only be satisfied in the most egregious circumstances where patent owners use their rights over a widely adopted standard (with no commercial alternatives) to block entry by competitors.

177 at 202 per Dawson J; 83 ALR 577; 63 ALJR 181; ATPR 40-925; *Melway Publishing Pty Ltd v Robert Hicks Pty Ltd* (2001) 205 CLR 1; 178 ALR 253; [2001] HCA 13; BC200100872 at [26]; *Rural Press Ltd v ACCC* (2003) 216 CLR 53; 203 ALR 217; [2003] HCA 75; BC200307578 at [76]. See, further, I B Stewart, 'Taking advantage of market power in section 46 of the Trade Practices Act 1974 (Cth)' (2008) 33 *ABLR* 343 at 358-61; A Duke, 'The need to close the "take advantage" gap in the regulation of unilateral anti-competitive conduct' (2008) 15 *CCLJ* 284 at 290-6.

74 See D Clapperton and S Corones, 'Locking in Customers, Locking out Competitors: Anti-Circumvention Laws in Australia and Their Potential Effect on Competition in High Technology Markets' (2006) 30 *MULR* 657 at 706.

75 See I Stewart, 'When should competitors give their rivals access to services provided by facilities or telecommunications services? An examination of Pt IIIA and Pt XIC of the Trade Practices Act 1974 (Cth) and the potential role of s 46' (2006) 34(5) *ABLR* 322 at 327.

76 Nielsen, above n 57, at 112-13 (arguing that 'there is no requirement that there be two markets before s 46 would operate in the case of a refusal to license').

77 Note that CSIRO did create a commercialisation entity to work the wireless patents, which it eventually sold to CISCO: see B H Diessel, 'Trolling for Trolls: The Pitfalls of the Emerging Market Competition Requirement for Permanent Injunctions in Patent Cases Post-EBAY' (2007) 106 *Michigan L Rev* 305 at 321-2.

78 Note that if the patent owner refused licences to work the patent to all potential manufacturers a compulsory licence under s 133 of the Patents Act may be available.

iii) Misuse of market power: Monopoly pricing and refusal to license on RAND terms

Rather than outright refusing to license, patent owners who are able to have their patented technology incorporated as an essential component of a standard may seek to extract royalty fees far in excess of what would be possible had the SSO and adopting members known of the patent. Where participants in the standards-setting process disclose essential IPRs, the SSO will often attempt to secure from participants a commitment to license any IPRs included in the standard on RAND terms. As there is often significant rivalry between competing technologies for inclusion in the standard, there is an incentive for participants to agree to these ex ante licensing conditions. If a participant refuses to commit to RAND licensing terms, the SSO could exclude that IPR from the scope of the standard and adopt a competing technology instead. The risk to the SSO of not acquiring a RAND commitment from prospective licensors is that the IP holder could subsequently demand licence fees in excess of what the SSO would have agreed to ex ante.⁷⁹ Such RAND commitments are now common in SSO agreements worldwide.⁸⁰

The RAND commitment provides an important mechanism for SSOs to minimise the cost of implementing a standard post-adoption.⁸¹ *Broadcom Corporation v Qualcomm Incorporated* was the first case to consider whether a participant could be liable under antitrust law for renegeing on a RAND commitment made during the standard setting process.⁸² The US Court of Appeals for the Third Circuit stated:

⁷⁹ The RAND commitment seeks to ensure that a licensor cannot charge royalties greater than a 'reasonable' level, which would prevent the licensor from extracting a monopoly return. However, there is considerable uncertainty surrounding the two terms, 'reasonable' and 'non-discriminatory', such that it may be difficult for a SSO to enforce the RAND commitment ex post. For more information, see A Devlin, 'Standard-Setting and the Failure of Price Competition' (2009) 65 *New York University Annual Survey of American Law* 217 at 221–2, 235–9, at SSRN <<http://ssrn.com/abstract=1429843>> (accessed 23 March 2010); IP2 Report, above n 3, p 47; cf M A Lemley, 'Intellectual Property Rights and Standard Setting Organizations' (2002) 90 *California L Rev* 1889 at 1966.

⁸⁰ See, eg, International Organization for Standardization (ISO)/International Electrotechnical Commission (IEC)/International Telecommunications Union (ITU) Common Patent Policy, cll 2 and 3, at <http://isotc.iso.org/livelink/livelink/fetch/2000/2122/3770791/Common_Policy.htm> (accessed 2 March 2010).

⁸¹ A submission to the DOJ and FTC hearings in 2002 that ultimately resulted in the IP2 Report, above n 3, provided some examples of where patent licence terms revealed only after the standard is adopted may impair parties' abilities to compete in the affected market. These include where the patentee: (1) seeks a royalty that is greater than the average profit margin of all the parties who will need licences; (2) seeks a broad grantback that appears even-handed but which has significantly disparate effects on different parties, perhaps forcing particular licensees to forfeit the value of their own major innovation investments, but the patentee refuses to deviate from its 'standard' agreement for any reason; (3) demands a minimum annual royalty based on 'administrative costs' which has the effect of locking out smaller rivals and new entrants; and (4) seeks royalties from downstream providers and refuses to license suppliers of upstream inputs: See IP2 Report, above n 3, p 46 (including n 69 — the Peterson Submission I, p 8).

⁸² Subsequent case law includes litigation brought against Qualcomm by Nokia in 2007/2008, concerning the same SSO (ETSI) and the same standard: *Nokia Corp v Qualcomm Inc*, CA2330, Delaware Chancery Court, Wilmington.

Although a patent confers a lawful monopoly over the claimed invention, its value is limited when alternative technologies exist. That value becomes significantly enhanced, however, after the patent is incorporated in a standard. Firms may become locked in to a standard requiring the use of a competitor's patented technology. The patent holder's IPRs, if unconstrained, may permit it to demand supra-competitive royalties. *It is in such circumstances that measures such as FRAND commitments become important safeguards against monopoly power.*⁸³

Where a patent owner accedes to a RAND commitment in the standards-setting process but later refuses to licence on RAND terms, then there can be significant harm imposed on the other members who developed and adopted the standard. High switching costs may prevent the negotiation and adoption of an alternate standard, and manufacturers and vendors may become locked-in to the higher licence fees proposed by the patent owner. In *Broadcom Corporation v Qualcomm Incorporated*,⁸⁴ Qualcomm was a participant in the European Telecommunications Standards Institute (ETSI) and its US counterparts. Qualcomm held some of the essential IPRs that ETSI ultimately included in its Universal Mobile Telecommunications System (UMTS) standard after Qualcomm committed to license its IPRs on FRAND terms. The technology owned by Qualcomm was a kind of mobile wireless telephony chipset called Wideband CDMA (WCDMA). Broadcom brought an action against Qualcomm, alleging that Qualcomm had (1) engaged in deception by falsely agreeing to license its technologies on FRAND terms then breaching those terms once its technology was included in the UMTS standard and (2) breached the FRAND terms by demanding discriminatorily higher royalties from competitors and customers using chipsets not manufactured by Qualcomm.⁸⁵ Broadcom further alleged that Qualcomm had a 90% share in the market for CDMA-path chipsets and was withholding favourable pricing in that market to coerce cellular telephone manufacturers to purchase only Qualcomm-manufactured UMTS-path chipsets in an attempt to obtain a monopoly in the UMTS chipset market.⁸⁶

The court of Appeals for the Third Circuit held that Qualcomm had violated § 2 of the Sherman Act. The court found evidence that Qualcomm was exploiting its near monopoly in the CDMA chipset market to obtain a new monopoly in the UMTS chipset market.⁸⁷ Qualcomm was discriminating among licensees of the essential WCDMA technology by charging higher fees to those who did not use Qualcomm's UMTS chipsets and was charging double royalties to UMTS cell phone manufacturers who use non-Qualcomm UMTS chipsets.⁸⁸ The court further found that Qualcomm was demanding royalties on parts of UMTS chipsets for which it did not own patents and was demanding that UMTS licensees grant back to Qualcomm licences for their own proprietary technologies on terms much more favourable to Qualcomm. Qualcomm was also discouraging price competition by demanding sensitive sales and pricing information from its UMTS chipset licensees, even when

⁸³ *Broadcom Corp v Qualcomm Inc* 501 F 3d 297 (3d Cir, 2007) at 314 (emphasis added).

⁸⁴ *Ibid.*

⁸⁵ *Ibid.*, at 318.

⁸⁶ *Ibid.*

⁸⁷ *Ibid.*

⁸⁸ *Ibid.*

those licensees were competing directly with Qualcomm.⁸⁹ The court held that:

(1) in a consensus-oriented private standard-setting environment, (2) a patent holder's intentionally false promise to license essential proprietary technology on FRAND terms, (3) coupled with an SDO's reliance on that promise when including the technology in a standard, and (4) the patent holder's subsequent breach of that promise, is actionable anti-competitive conduct.⁹⁰

In Australia, establishing misuse of market power under s 46(1) may be more difficult because, as explained above, s 46(1) only catches conduct engaged in after substantial market power is acquired. Thus, a breach of an agreement to license on RAND terms where the agreement was made before the licensor had substantial market power will not, by itself, be enough to constitute misuse of market power under s 46(1). Presuming that the firm has acquired substantial market power in the relevant market as a result of the firm's patented technology being included in the standard, the next question will be to determine whether the firm's conduct involves taking advantage of that market power.

Merely charging monopoly prices is unlikely to constitute 'taking advantage' of market power. For example, CSIRO's patent licensing policies over the 802.11 wireless standards have come under some criticism from those who believe that the applicable royalties are too high; there are some arguments that suggest that CSIRO's windfall profits have overcompensated it for its role in the development of wireless technology and that, as a result, production of wireless devices is more expensive than is optimal.⁹¹ However, exploitation of market power to charge the maximum price that the market will bear does not, without some form of exclusionary conduct, fall within s 46(1).⁹² This conduct is not caught by s 46 because it is not, in itself, anti-competitive — charging monopoly prices is considered to be more likely to expose the monopolist to greater competition rather than deter competition.⁹³

⁸⁹ Ibid.

⁹⁰ Ibid, at 314. Interestingly, the court also stated that even if Qualcomm's WCDMA technology was the only candidate for inclusion in the standard, it still would not have been selected by the relevant SDOs absent a FRAND commitment: *ibid*, at 316. For further commentary on this case, see Wolfram, above n 4, at 3–8; Hockett and Lipscomb, above n 31, at 20, 22. For other relevant US case law, see *In the Matter of Negotiated Data Solutions LLC*, FTC File No 052-0094 (23 September 2008), at <<http://www.ftc.gov/os/caselist/0510094/>> (note that this was an action brought under § 5 of the Federal Trade Commission Act (the FTC Act), not the Sherman Act).

⁹¹ See J Hruska, 'Dark Australian patent cloud looms over 802.11n spec', *Ars Technica*, 24 September 2007, at <<http://arstechnica.com/old/content/2007/09/dark-australian-patent-cloud-looms-over-802-11n-spec.ars>> (accessed 13 November 2010); B A Wagar, 'Intel Corp v Commonwealth Scientific & Industrial Research Organisation: Can Equity Step in Where Public Standards and the Patent System Seem at Odds' (2007) 47 *Jurimetrics* 429 at 431 (highlighting the claim by computer manufacturers that CSIRO's proposed royalty rate of up to 10% of the retail price of wireless adapters was unreasonably high).

⁹² See *Pont Data Australia Pty Ltd v ASX Operations Pty Ltd* (1990) 21 FCR 385; 93 ALR 523; ATPR 41-007; BC9003295; *ASX Operations Pty Ltd v Pont Data Aust Pty Ltd (No 2)* (1991) 27 FCR 492; 100 ALR 125; ATPR 41-109; BC9103097; B Reid, 'Section 46 — A new approach' (2010) 38(1) *ABLR* 41 at 44.

⁹³ See Corones, above n 62, at 463–4; Reid, above n 93, at 44.

The tension between the incentives provided by patent law to innovate and the increased supply costs that monopoly pricing imposes on the manufacture of standards-compliant devices is not one that is easily addressable under s 46. The appropriate balance between static efficiency in reducing supply costs in downstream markets and dynamic efficiency in providing sufficient incentives to innovate without stifling either production or future innovation⁹⁴ is in most cases more appropriately addressed through the bounds of the patent monopoly than through competition law.⁹⁵ Courts are accordingly generally reluctant to restrain firms from exercising their patent monopoly to charge monopoly prices because of a well-founded fear that doing so may disrupt the incentives that patent law provides.⁹⁶

In order to raise liability under s 46(1), something more than merely charging high licence fees is likely to be required to satisfy the ‘taking advantage’ test. For example, Qualcomm’s conduct in charging higher licence fees for use of the WCDMA chipset to those who did not use Qualcomm’s UMTS chipset is a form of leveraging which could conceivably be prohibited under s 46(1).⁹⁷ Qualcomm’s conduct goes beyond mere exploitation of a patent right and becomes potentially anti-competitive by exploiting its monopoly over the WCDMA chipset to reduce competition in the market for UMTS chipsets. A patent owner is only likely to be found to have taken advantage of its market power derived from the inclusion of patented technology in a standard if it engages in discriminatory licensing that is clearly anti-competitive, rather than merely charging the highest royalty rates it can extract.

iv) Purposive analysis and remedies

The third, purposive element of s 46(1) will depend entirely on the facts, and may be relatively difficult to prove in a standards context. The patent owner will only be liable if it refuses to licence in order to eliminate or substantially damage a competitor, prevent entry into any market, or deter competition in any market.⁹⁸ A court may be able to find the requisite subjective motive in circumstances similar to those in *Qualcomm* or *ESS v PC-Tel*, but probably not in other circumstances where a patent owner seeks to capture a standard so that it can charge supra-competitive royalty rates.

If a patent owner is found to have contravened s 46(1), it may be ordered to issue a compulsory licence. In recent years, two ACCC investigations into alleged s 46 contraventions have been settled on the basis of an order for

94 See J A Schumpeter, *Capitalism, socialism and democracy*, Psychology Press, London, 1994, p 84; see further M Landrigan, ‘Competition v intellectual property: Uneasy allies or natural adversaries?’ (2008) 16(2) *TPLJ* 116 at 120–1.

95 See Nielsen, above n 57, at 103. See also M A Lemley and C Shapiro, ‘Patent Holdup and Royalty Stacking’ (2007) 85 *Texas L Rev* 1991 (arguing that patent law provides patent owners to demand higher than efficient royalty rates, particularly where the patented technology is one small but essential component of a larger device).

96 For a comparative overview of EU, US and Australian approaches to compulsory licensing of IP rights, see C Oddie and P Eyers, ‘Erosion of rights — or redressing the balance: competition challenges to intellectual property rights’ (2004) 12(1) *TPLJ* 6.

97 See, eg, *ACCC v Baxter Healthcare Pty Ltd* (2005) ATPR 42-066; [2005] FCA 581; BC200504213.

98 Trade Practices Act 1974 (Cth) s 46(1)(a)–(c).

compulsory licensing. One related to proceedings brought against the Commonwealth Bureau of Meteorology for the refusal to supply basic meteorological information to a competitor for the purpose of deterring the entry of that competitor into the enhanced meteorological services market.⁹⁹ The other related to proceedings brought against Telstra for the refusal to supply information relating to its business telephone directory on reasonable terms to its competitors.¹⁰⁰ Assuming the case were to proceed to final judgment, the court may grant an injunction requiring a patent owner to license an essential component of a standard under s 80(1) and (5) of the TPA. Furthermore, s 133(1) and (2)(b) of the Patents Act 1990 (Cth) now provide that the Federal Court may grant a compulsory licence to an applicant to use a patented invention where the court is satisfied that patentee has contravened Pt IV of the TPA.¹⁰¹ The High Court has noted the difficulty in framing a suitably worded injunction to grant access in the case of infrastructure,¹⁰² however, where these difficulties exist, s 87(1) and (2)(f) of the TPA may assist by allowing the court to grant an ancillary order directing a person to supply services to the person who has suffered or is likely to suffer loss or damage.¹⁰³ Courts are generally hesitant to order compulsory licensing of patents, but it would seem that Australian competition law could conceivably restrain at least the most egregious forms of complete or partial refusal (for anti-competitive reasons) to license a patent over an essential component of a widely adopted standard.

C The suitability of competition law to deal with patent ambush

The subversion and capture of standard setting processes through the non-disclosure of patent rights poses significant risks to efficiency which are not always directly addressable through competition law. The standard-setting

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- ⁹⁹ See ACCC, 'Weather bureau misused market power ACCC claims', Release # MR 016/95, issued 14 December 1995, at <<http://www.accc.gov.au/content/index.phtml/itemId/86959/fromItemId/479825>> (accessed 8 March 2010); ACCC, 'Weather court case settled', Release # MR 048/97, issued 21 May 1997, at <<http://www.accc.gov.au/content/index.phtml/itemId/87108/fromItemId/378004>> (accessed 8 March 2010). See also Corones, above n 62, pp 498, 526–7.
- ¹⁰⁰ See ACCC, 'Telephone directory data now accessible to all', Release # MR 008/97, Issued 19 February 1997, at <<http://www.accc.gov.au/content/index.phtml/itemId/87148/fromItemId/378004>> (accessed 10 March 2010). See also Corones, above n 62, pp 498, 526–7. Telstra's telephone directory was held to be subject to copyright protection as a data compilation in *Telstra Corp Ltd v Desktop Marketing Systems Pty Ltd* (2001) 181 ALR 134; 51 IPR 257; [2001] FCA 612; BC200102732. However, subsequent cases have cast doubt on the subsistence of copyright in, and Telstra's ownership of copyright in, the Yellow Pages and White Pages telephone directories: *IceTV Pty Ltd v Nine Network Australia Pty Ltd* (2009) 239 CLR 458; 254 ALR 386; [2009] HCA 14; BC200902942; *Telstra Corp Ltd v Phone Directories Co Pty Ltd* (2010) 264 ALR 617; 85 IPR 571; [2010] FCA 44; BC201000413.
- ¹⁰¹ See C Lawson, 'Compulsory licensing under the Patents Act 1990 to remedy anti-competitive conduct under the Trade Practices Act 1974' (2008) 36 *ABLR* 369; Nielsen, above n 57, at 123–4.
- ¹⁰² *NT Power Generation v Power and Water Authority* (2004) 219 CLR 90; 210 ALR 312; [2004] HCA 48; BC200406480 at [78]–[80].
- ¹⁰³ S Corones, 'Section 46 of the Trade Practices Act as an alternative access regime' (2005) 33 *ABLR* 150 at 155.

process can increase efficiency in network markets by allowing participants to evaluate the most appropriate technologies to increase interoperability over a range of downstream products. Standardisation also increases competition by enhancing the ability for firms to compete at various levels of the supply chain.¹⁰⁴ Capture of such a standard, however, can greatly reduce the efficiency gains by increasing supply costs and reducing competition for alternate implementations of a particular function or process.

Australian competition law may be able to appropriately address and restrain the most egregious forms of patent ambush, particularly where a patent owner uses the market power derived from inclusion in a standard to exclude certain downstream manufacturers from the market. Importantly, however, s 46 will not restrain a patent owner from capturing a standard by either refusing to disclose the existence of an essential patent or from renegeing on a RAND commitment in order to increase revenue without an associated attempt to limit competition. In practice, even where some exclusionary conduct exists, establishing a successful action under s 46 against a patent owner is likely to be relatively difficult, particularly as courts are often hesitant to interfere with the incentive schemes provided by the patent monopoly by requiring compulsory licences to patented technologies. Apart from relatively clear-cut cases of exclusive dealing, s 46 may not be the best vehicle for assessing this balance, particularly where a voluntary private contractual system can be developed.¹⁰⁵ In the next section, we examine the contractual frameworks commonly adopted by SSOs and the potential limits imposed by competition law on these private arrangements.

III SSOs and ex ante licensing arrangements

In order to combat strategic behaviour on behalf of patent owners in the standards-setting process, SSOs have moved to adopt private methods to address the disclosure and licensing of essential patent rights. Contractual arrangements can potentially provide a framework that is more tailored to the needs of SSO participants and more specific and certain than competition law. In recent years, discussion has focused on whether SSOs should be permitted to require IPR holders to make specific licensing commitments that are better defined than RAND terms.¹⁰⁶ There are pro-competitive benefits to ex ante bargaining to establish licensing terms, including avoiding patent hold-up that could occur after the standard is set; improved likelihood of price competition among alternative technologies vying for inclusion in the standard; and improved decision-making by the SSO about the most appropriate technology for inclusion in the standard where the SSO can make tradeoffs between price and technical merit that would not be possible unless the prices of patented technologies were known before the standard is set.¹⁰⁷ Because the standard-setting process provides patent owners with the opportunity to negotiate general terms based on the value of their inventions to the market, their research and development costs, and the expected value of the market for

104 See Hillel, above n 21, at [6].

105 See *ibid.*, at [52]–[55].

106 IP2 Report, above n 3, p 49.

107 *Ibid.*, pp 52–3.

standards-compliant devices, an efficient balance between IP incentives and downstream access may be easier to reach than any judicially imposed determination.¹⁰⁸

However, there are also identified anti-competitive risks with *ex ante* licensing activity. The standard setting process brings together horizontal competitors into a collaborative setting. As Alan Devlin writes:

Were industry participants granted free reign to discuss royalties, costs and other price metrics, inevitably the SSO process would become the perfect vehicle for bid-rigging and downstream collusion.¹⁰⁹

Indeed, in the context of SSOs, US antitrust scholars frequently cite Adam Smith's classic proclamation that little good can come from competitors meeting.¹¹⁰ In these circumstances, price discussions among SSO members could constitute cartel conduct. An associated risk is that SSO members could act collectively against an IPR holder to compel the IPR holder to license its patents at an artificially low price.¹¹¹ Monopsony power is generally considered to pose an equally significant risk to competition as monopoly power.¹¹²

The solution that some SSOs appear to be moving towards is to require participants to state, before the standard is set, the maximum royalty rate and most restrictive licensing terms that they would demand if the standard adopted their technology.¹¹³ In 2006–2007, the US DOJ considered the *ex ante* licensing policies of two SSOs: the VMEbus International Trade Association (VITA), which develops standards for computer bus architecture, and the IEEE, which develops technology standards for computers and engineering. The VITA policy required: (1) disclosure of all known patents and patent applications that may become essential; (2) disclosure of maximum royalty rates¹¹⁴ and the most restrictive non-royalty terms that the member would demand for essential rights;¹¹⁵ and (3) no horizontal negotiations — members

108 See Lemley, above n 4, at 1971–2.

109 Devlin, above n 80, at 234. See also Lea and Hall, above n 2, at 84; IP2 Report, above n 3, p 51; Masoudi, 'Efficiency in Analysis of Antitrust', above n 12, p 8.

110 'People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices': A Smith, *The Wealth of Nations*, Penguin Classics, London, 1999, p 183. See, eg, Devlin, above n 80, at 219 (n 8); IP2 Report, above n 3, p 51; D D Leeds, 'Raising the Standard: Antitrust Scrutiny of Standard-Setting Consortia in High Technology Industries' (1996) 7 *Fordham Intellectual Property, Media & Entertainment LJ* 641; M A Lemley, 'A New Balance Between IP and Antitrust' (2007) 13(2) *Southwestern Jnl of Law and Trade in the Americas* 237 at 255; M Howard Morse, 'Standard Setting and Antitrust: The Intersection Between IP Rights and the Antitrust Laws' (2003) May/June *IP Litigator* 17 at 20.

111 See Lemley, above n 4, at 1938, 1943–48; IP2 Report, above n 3, p 53; Masoudi, 'Efficiency in Analysis of Antitrust', above n 12, p 8.

112 See Lemley, above n 4, at 1939.

113 Masoudi, 'Efficiency in Analysis of Antitrust', above n 12, pp 7–8; Devlin, above n 80, at 235, 258–9.

114 This could be in terms of dollars or as a percentage of a device sales price: Masoudi, 'Efficiency in Analysis of Antitrust', above n 12, p 13 and Masoudi, 'Antitrust Enforcement and Standard Setting', above n 12, p 3.

115 These commitments are irrevocable; however, patent holders are free to submit subsequent declarations with lower rates and less restrictive terms. These commitments also only apply to the implementation of the VITA standard being developed and any revisions to that

may consider the various declared licensing terms when deciding which technology to support for the standard, but cannot negotiate or discuss specific licensing terms among members or with third parties.¹¹⁶ The policy also created an arbitration procedure to resolve disputes over members' compliance and specified particular consequences of non-compliance, including that failure to disclose an essential patent will lead to that patent being licensed on a royalty free basis.¹¹⁷ Under the IEEE policy, if the chair of an IEEE standards working group believes that a patent holder has essential patents, the chair may ask the patent holder to disclose relevant patent rights and to provide a letter of assurance about licensing terms. The patent holder then has five options: (1) provide no assurance; (2) state that it does not hold essential patents; (3) commit not to assert its patents against implementers of the standard; (4) commit to license on RAND terms; or (5) commit to maximum price terms or most restrictive non-price terms. The IEEE will then post the licensing assurances, or lack thereof, on its website. If the patent holder chooses the fifth option, the IEEE working groups may then use this information to assess the relative costs of alternative technologies.¹¹⁸ The DOJ concluded that neither policy was likely to harm competition. Importantly, it found that the VITA policy should not lead to depression of licence terms because the policy prohibited joint negotiation of terms.¹¹⁹ Instead, patent holders propose their terms, balancing their interest in royalties against the possibility that too high a price will prevent their technology being chosen for the standard. After the standard is set, the patent holder and each prospective licensee negotiate separately, subject only to the maximum terms originally stated by the patent holder.¹²⁰ The DOJ also concluded that the IEEE policy could provide pro-competitive benefits as patent holders may compete to offer the most attractive combination of technology and licensing terms and members may make better informed decisions.¹²¹

In Australia, it is necessary to consider whether *ex ante* licensing arrangements could constitute anti-competitive conduct under the cartel provisions of the TPA.¹²² There are two forms of *ex ante* licensing arrangements to consider: first, where the SSO IP Policy provides for an actual price or a formula for calculating the price, or where the SSO members

standard, but they do not apply to any other uses of the technology: Masoudi, 'Efficiency in Analysis of Antitrust', above n 12, p 13 and Masoudi, 'Antitrust Enforcement and Standard Setting', above n 12, p 3.

116 Masoudi, 'Efficiency in Analysis of Antitrust', above n 12, p 13 and Masoudi, 'Antitrust Enforcement and Standard Setting', above n 12, pp 3–4.

117 Ibid.

118 Masoudi, 'Antitrust Enforcement and Standard Setting', above n 12, p 4.

119 Masoudi, 'Efficiency in Analysis of Antitrust', above n 12, p 13 and Masoudi, 'Antitrust Enforcement and Standard Setting', above n 12, p 4.

120 Ibid.

121 Masoudi, 'Antitrust Enforcement and Standard Setting', above n 12, p 5.

122 Note that an SSO or its members may also be liable under the more general provisions of s 45(2) of the TPA where they enter into a contract, arrangement or understanding that contains a provision which has the purpose or likely effect of substantially lessening competition. Price fixing was previously deemed, under the repealed s 45A, to satisfy the substantial lessening of competition test. Since we are dealing solely with potential price fixing in this article, we will focus on the operation of the newly introduced cartel provisions which subsume s 45A, rather than the more general operation of s 45.

collectively agree on the actual price that is to be paid for the licensed technology; and second, where the SSO IP Policy asks a patent holder to state the maximum royalty price that would be demanded for use of the patented technology (the VITA approach).

The relevant provisions of the TPA are s 44ZZRF, which prohibits the making of a contract, arrangement or understanding that contains a cartel provision, and s 44ZZRG, which prohibits the giving effect to a cartel provision. ‘Cartel provision’ is defined in s 44ZZRD, and requires three elements to be established: a contract, arrangement or understanding; that has the purpose or effect of controlling prices or supply; and operates between (would-be) competitors. The first element, that there be a contract, arrangement or understanding, can fairly clearly be established in the context of ex ante licensing arrangements. The SSO’s IP Policy and the members’ acceptance of the IP Policy will constitute a contract, arrangement or understanding as to either the specific price to be charged for the licensed technologies or to the assurance that a licensor will not demand in excess of the maximum price specified by that licensor.¹²³ The third element¹²⁴ is also likely to be trivially satisfied, since at least some subset of SSO participants are likely to be in competition with each other for the acquisition of patent licences to make or use the relevant technology.

The most important element in this scenario is the purpose/effect requirement in relation to the control of prices, found in s 44ZZRD(2), which provides that:

(2) The purpose/effect condition is satisfied if the provision has the purpose, or has or is likely to have the effect, of directly or indirectly:

- (a) fixing, controlling or maintaining; or
- (b) providing for the fixing, controlling or maintaining of;
 - the price for, or a discount, allowance, rebate or credit in relation to:
 - ...
- (d) goods or services acquired, or likely to be acquired, by any or all of the parties to the contract, arrangement or understanding . . .

The service here is the patent licence, which is the legal right to use the patented technology. The manufacturer members of the SSO (the parties to the contract, arrangement or understanding) are seeking to acquire this service from the patent holder. Where the SSO members together agree to the actual price that they each will pay to acquire the patent licence, then this conduct will clearly fall within the scope of s 44ZZRD(2) as price fixing. However, the situation is less clear where the patent holder is simply asked to state a maximum licence price. While this conduct is likely to be more than a mere recommendation,¹²⁵ it may not be enough to amount to a cartel provision.

¹²³ There is likely to be sufficient evidence of communication, consensus and commitment, such that there is more than a mere hope that the prospective licensor will abide by the licensing arrangements. See, eg, *Apco Service Stations Pty Ltd v ACCC* (2005) 159 FCR 452; ATPR 42-078; [2005] FCAFC 161; BC200505938.

¹²⁴ TPA s 44ZZRD(4).

¹²⁵ TPA s 44ZZRD(6).

Given that the cartel provisions of the TPA were only introduced in 2009,¹²⁶ there is no case law that considers s 44ZZRD directly. However, we can look to the case law that considers s 45A (now repealed), which formerly applied to price fixing arrangements.¹²⁷ In *Apco Service Stations Pty Ltd v ACCC*, the Full Federal Court found that in order to fix a price, one or more of the parties to the arrangement must accept an obligation to give up the freedom that would otherwise exist to set prices.¹²⁸ On the one hand, it can be argued in the VITA approach that the patentee is not restrained in their freedom to set a price except to the extent that the patentee itself specifies an upper limit for the price. This upper limit is determined entirely by the patentee itself and there are no constraints imposed by the SSO or its members.¹²⁹ On the other hand, it could be argued that the patentee's freedom to set a price is constrained by the pressure imposed by the SSO to set a maximum price before the standard is set, leaving the patentee restricted in its ability to freely respond to changing market forces with respect to the standard and the standardised technology.¹³⁰

Whether a court will find a VITA approach style arrangement to satisfy the purpose/effect condition in s 44ZZRD(2) will depend on the facts of the case and how the court interprets the SSO IP Policy with respect to this condition. There is considerable uncertainty in this respect, and the dual-track criminal and civil penalties enforceable under the new regime poses significant risk for SSOs and participants who wish to develop private solutions to preclude patent ambush.

A The application of s 51(3)

Where liability under the cartel provisions may be established, it will be necessary to consider the operation of s 51(3) of the TPA. Under this section, a contravention of Pt IV of the TPA¹³¹ will not be taken to have been committed by reason of the imposing of, or giving effect to, a condition of a

126 The Trade Practices Amendment (Cartel Conduct & Other Measures) Act 2009 (Cth) was passed on 16 June 2009.

127 See G Samuel, 'The ACCC enforcement perspective on serious cartel conduct' (2009) 17 *TPLJ* 244 at 246 (explaining that '[e]verything that was captured by s 45A is now captured by the new cartel provisions').

128 *Apco Service Stations Pty Ltd v ACCC* (2005) 159 FCR 452; ATPR 42-078; [2005] FCAFC 161; BC200505938 at [45] per Heerey, Hely and Gyles JJ. The court in the *CC (NSW)* case likewise held that an arrangement or understanding has the effect of 'controlling price' if it restrains a freedom that would otherwise exist as to the price to be charged: *ACCC v CC (NSW) Pty Ltd* (1999) 92 FCR 375; 165 ALR 468; [1999] FCA 954; BC9904988 at [14168] per Lindgren J.

129 There is also dicta from Lockhart J in *Radio 2UE Sydney Pty Ltd v Stereo FM Pty Ltd* which indicates that the effect of the arrangement on competition will be a relevant consideration: 'If competitors make an arrangement to establish a better market by, eg, forming an organisation through which they operate to exchange information in ways that make prices more competitive, I do not see how such an arrangement is, per se, prohibited by s 45A': *Radio 2UE Sydney Pty Ltd v Stereo FM Pty Ltd* (1982) 62 FLR 437 at 448 per Lockhart J; 44 ALR 557; ATPR 40-318.

130 See, eg, *Trade Practices Commission v Australian Autoglass Pty Ltd* (1988) ATPR 40-881, where the setting of maximum discount margins was held to constitute a price fixing arrangement or understanding even though suppliers were free to set prices within the range.

131 Sections 46, 46A and 48 of the TPA are exempted from the scope of s 51(3). The cartel provisions are not.

licence granted by the proprietor, licensee or owner of patent, to the extent that the condition relates to the invention to which the patent relates or articles made by the use of that invention.

It seems straightforward to suggest that an agreement about applicable royalty rates *relates* to the invention covered by the patent;¹³² the more important question is whether the SSO IP Policy is likely to fall within the scope of s 51(3) at all, as imposing or giving effect to a condition of a licence granted by the patent owner. The SSO IP Policy, and any agreement between SSO members about prices to be charged for a patent licence, will come *before* the patent licence is formed. In fact, these agreements will be directed at setting (or at least influencing) the conditions that will be included in the patent licence, and may not fall within s 51(3), which is more likely to apply to conduct engaged in after a licence is granted, in order to give effect to the licence conditions. It is unlikely, therefore, that s 51(3) will immunise an SSO IP Policy from potential liability under the cartel provisions, although there remains considerable uncertainty about the proper scope of s 51.¹³³

B Authorisation by the ACCC

In order to address the uncertainty that surrounds *ex ante* SSO IP agreements, where a provision of a SSO's policy is likely to be a cartel provision, the SSO member corporations may apply to the commission for an authorisation under s 88 of the TPA.¹³⁴ The commission has power to grant an authorisation to a corporation to make a contract or arrangement, or arrive at an understanding, if a provision of the proposed contract, arrangement or understanding would be or might be a cartel provision.¹³⁵ Whether such an authorisation is desirable will depend upon the terms of the IP policy. A policy that attempts to suppress the incentives provided by the patent system by limiting royalties that the SSO

132 There is a high degree of uncertainty about the scope of s 51(3) and particularly this requirement that conditions *relate* to the patented technology; in the only case to consider the section to date, *Transfield Pty Ltd v Arlo International Ltd* (1980) 144 CLR 83 at 103; 30 ALR 201; 54 ALJR 323; BC8000079, only Mason J specifically discussed the scope of this requirement, stating that conditions which seek to gain advantages collateral to a patent will not be covered by s 51(3).

133 See National Competition Council (NCC), Commonwealth of Australia, *Review of Sections 51(2) and 51(3) of the Trade Practices Act 1974*, 1999; Intellectual Property and Competition Review Committee, above n 17, pp 202–15; I Eagles and L Longdin, 'Competition in Information and Computer Technology Markets: Intellectual Property Licensing and Section 51(3) of the Trade Practices Act 1974' (2003) 3(1) *QUTLJ* 28 at 33–7; R R Hoad, 'Brave new world or much ado about nothing? Practical effect of proposed changes to Trade Practices Act, s 51(3)' (2007) 18(4) *AIPJ* 201 at 212 (explaining three main competing interpretations of the 'relates to' test); D Clapperton and S Coronos, 'Locking in Customers, Locking out Competitors: Anti-Circumvention Laws in Australia and Their Potential Effect on Competition in High Technology Markets' (2006) 30 *MULR* 657 at 708–9; J McKeough, 'Is Intellectual Property Different, or Are All Unhappy Monopolists Similar' (2003) 26 *UNSWLJ* 289.

134 The procedures for applying for a grant of authorisation under s 88 of the TPA are set out in s 89 of the TPA.

135 TPA s 88(1A). Section 44ZZRM provides that s 44ZZRF and s 44ZZRJ do not apply in relation to the making of a contract that contains a cartel provision if: (a) the contract is subject to a condition that the provision will not come into force unless and until the corporation is granted an authorisation to give effect to the provision; and (b) the corporation applies for the grant of such an authorisation within 14 days after the contract is made.

manufacturer members are willing to pay below the value and competitive price of the technology is unlikely to provide an efficient and desirable solution. On the other hand, a policy like the VITA approach which reduces the risk of patent ambush and increases competition between differing technologies for inclusion in the standard without allowing manufacturers to collectively bargain for sub-competitive royalty rates is more likely to increase efficiency. Given the likely pro-competitive benefits of these types of ex ante licensing arrangements, the commission may be able to increase certainty and efficiency in standard setting and decrease the risk of patent ambush by selectively granting authorisation where it is required and justified.

IV Conclusion

This article has assessed how Australian competition law would apply to common situations concerning the licensing of essential IPRs in the standard setting process. Patent holders are unlikely to face liability under the TPA for non-disclosure of essential IPRs in contravention of a SSO IP Policy, and will generally only face liability for a refusal to license IPRs on RAND terms if that refusal involves leveraging or exclusive dealing. In contrast, SSOs face considerable scrutiny and regulatory risk under the cartel provisions of the TPA for any attempts to instil more certainty around the licensing of essential IPRs by imposing pricing rules or restrictions. This increased risk does not provide a generally desirable result. In the US context, Alan Devlin has described the result as ‘wholly skewed’, arguing that:

In its haste to avoid harm, the government has created antitrust laws that perversely and unintentionally foreclose the very benefits they were designed to achieve. More specifically, these laws have led to a dearth of ex ante royalty competition between owners of substitute technologies in the standard-setting process.¹³⁶

Even the US DOJ has stated that ‘antitrust law should not prohibit practices that make standard setting more efficient, because efficiency is good for consumers’.¹³⁷ The ultimate goal is always the long-term efficiency of standard setting.¹³⁸

In attempting to promote ex ante royalty competition in the standard setting process, there are a number of small policy adjustments that SSOs can make that are unlikely to breach Australian competition law. These include:

- reviewing on a recurrent basis the essential patents for a certain standard;¹³⁹
- asking patent holders to make the existence of licence agreements for essential IPRs and the licence conditions public, to promote transparency;¹⁴⁰ and

¹³⁶ Devlin, above n 80, at 219–20.

¹³⁷ Masoudi, ‘Efficiency in Analysis of Antitrust’, above n 12, p 5.

¹³⁸ Masoudi, ‘Antitrust Enforcement and Standard Setting’, above n 12, p 7.

¹³⁹ M Brenning, DG COMP, European Commission, ‘Competition & Intellectual Property Policy Implications of Late or No IPR Disclosure in Collective Standard-Setting’, Brussels, 17 June 2002, at <ec.europa.eu/competition/speeches/text/sp2002_037_en.pdf> (accessed 25 October 2009).

¹⁴⁰ Bekkers, Verspagen and Smits, above n 15, at 187; Lemley, above n 4, at 129.

- establishing a forum where licensees can complain about RAND licence terms (or the absence thereof) in relation to a particular patent¹⁴¹ or establishing a means of dispute resolution within the SSO to help resolve royalty disagreements.¹⁴²

Since private ordering to preclude patent ambush will often increase efficiency by increasing competition between technologies and limiting the ability of monopolists to capture industry standards and rely on high switching costs to impose supracompetitive licence fees,¹⁴³ the most desirable approach may be for the ACCC to authorise SSO policies that could otherwise breach the new cartel provisions. In general terms, there is likely to be a distinction between policies that are careful to prohibit non-disclosure and maintain competition — like the VITA approach — and those that effectively preclude competition and seriously undercut the patent monopoly by allowing manufacturers to drive licence fees below competitive rates. The ideal role for competition law and the commission to play in the standard-setting process, then, seems to be in upholding this distinction in a meaningful way that empowers the efficiency gains of standardisation without allowing SSO members to erode important patent incentives by colluding on licence terms.

141 IP2 Report, above n 3, p 47.

142 Lemley, above n 4, at 1965.

143 See M A Lemley, 'Ten Things to Do about Patent Holdup of Standards (and One Not To)' (2007) 48 *Boston College L Rev* 149 at 167–8; see also M A Lemley and C Shapiro, 'Patent Holdup and Royalty Stacking' (2007) 85 *Texas L Rev* 1991 at 2008–9.