Interactive Entertainment Association of Australia

30 April 2004

The Secretary
Senate Select Committee on the Free Trade Agreement
between Australia and the United States of America
Suite S1.30.1, The Senate
Parliament House
Canberra ACT 2600
AUSTRALIA

Dear Secretary

Submission to the Senate Select Committee on the Free Trade Agreement between Australia and the United States

Thank you for providing us with an opportunity to make a submission in relation to this inquiry.

The implementation of the Free Trade Agreement with enhanced IP arrangements will provide a stronger legal framework for the industry and enhance and strengthen the dynamic trading environment between Australia and the United States.

The Australian market for computer and video games is expanding rapidly with sales of consoles, games and peripherals in 2003 is estimated to be $796 million. However, the single most significant threat to the growth of the industry is the counterfeiting and piracy of interactive games. As well as "traditional" piracy, the growth in the market of online gaming means internet piracy is now a serious and growing problem for the interactive entertainment industry.

As we see it, the Australia-US Free Trade Agreement provides the framework for Australia to implement transparent and consistent legal provisions and enforcement procedures that includes ISP liability for copyright infringement.

The Interactive Entertainment Association of Australia (IEAA) is a not-for-profit trade association for the Interactive Entertainment Industry and represents Australian companies that are responsible for the sales, marketing, distribution and development of computer and video games software, hardware and accessories.

Members of IEAA are Acclaim Entertainment, Activision, Atari Australia, Eidos Interactive, Electronic Arts, Microsoft, Mindscape Asia Pacific, Nintendo Australia, Sony Computer Entertainment, Take 2 Interactive, THQ, Ubi Soft and Vivendi Universal Games.

IEAA has active links with like Associations in America, UK and Europe and locally with the Game Developers Association of Australia.

IEAA would be happy to meet with the committee at their convenience to discuss this submission further.

Yours faithfully

Beverly Jenkin
Chief Executive Officer

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IEAA SUBMISSION TO

THE SENATE SELECT COMMITTEE ON

THE FREE TRADE AGREEMENT BETWEEN THE USA AND AUSTRALIA

INTRODUCTION

The Interactive Entertainment Association of Australia (IEAA) is the Australian not-for-profit trade association dedicated to serving the business and public affairs needs of companies that are responsible for sales, marketing, distribution and development of computer and video games software, hardware and accessories.

The newest forms of entertainment are most susceptible to counterfeit and copyright infringement, which is a *criminal activity.* In the absence of the introduction of measures such as those contained in the Aus – US FTA (FTA), the cost of piracy and counterfeiting of computer and video games is likely to continue to grow, a fact which was also highlighted in the report by the House of Representatives Standing Committee on Legal and Constitutional Affairs, "Cracking down on copycats: infringement of copyright in Australia" (Copycats Report) handed down in December 2000.

In summary copyright and protection of intellectual property rights are vital to IEAA members. Australian law and the priority given to copyright enforcement have been allowed to slide to levels unacceptably below those of the European Union and the United States. This is having two unfortunate consequences for the computer and video games industry.

First, the penetration of online gaming is being impeded because the absence of ISP liability provides distributors with little protection; hence Australian consumers are not gaining access to the latest form of games distribution as readily as their counterparts elsewhere in the developed world, meanwhile developers are not investing as much into the local production of online games as the market does not justify such investment.

Second, the cost of piracy and counterfeiting of computer and video games is likely to continue to grow in the absence of the introduction of the measures contained in the FTA Intellectual Property Chapter, Chapter 17. The Allen Consulting Group estimated those costs to the interactive entertainment industry for 2002 to be $100 million in lost sales and $21.8 million in lost profits.

BACKGROUND

Although interactive entertainment is a relatively new phenomenon it is growing fast. The total market value of interactive entertainment in Australia has increased by 43.5% between 2001 and 2003.

In 2003 the total value of the Australian interactive entertainment market was estimated to be $796 million with $462 million representing games software and $334 million for console hardware and peripherals. This represents a spend by Australians of $2.05 million per day or $100 per household per year.

Many Australians are surprised that the age profile of gamers is not as young as they expect. People who started playing computer games 10 to 15 years ago still enjoy the interactive medium. They appreciate the growing sophistication and evolution of modern technology and can afford to pay $100 per game. The age break down of those who play computer games is 30% under 18, 50% 18-39 and 20% over 39.

It is also a common misconception that copyright theft only affects the copyright holder, however,

like other forms of theft, there is ramifications for the broader community through lack of consumer protection offered by legitimate warrantees and guarantees and further loss to the community through lost revenue to the Government by way of lost taxes.

In terms of both consumers and games development, Australia is a global player. There is increasing international recognition of the Australian interactive games industry as being sophisticated, dynamic and at the forefront of technology. Employment in Australia's interactive games industry is growing, as is local and international investment, however, IEAA believes the growth of the industry could be stronger with a stronger intellectual property protection regime.

ECONOMIC AND CONSUMER BENEFITS OF REDUCING COPYRIGHT COUNTERFEITING

In 2003 the IEAA joined with the Australian Toy Association and the Business Software Association of Australia to commission The Allen Consulting Group to conduct research into the effect of counterfeiting on the industries as well as consumers and Government.

The major finding was that in 2002 counterfeiting resulted in $667 million in lost sales, of which $100 million was attributable to the computer and video games industry. The report stated:

"Costs of counterfeiting are also borne by the economy which loses tax revenue because counterfeiters tend to operate outside the tax net; and consumers who may be deceived into buying non-original and/or inferior goods and who are often disappointed when they realise that they have non-genuine products and try to seek redress with the vendor, or are at serious health or safety risk with counterfeit toys."

The Allen Consulting Group report went on to assess the benefits that would accrue from a reduction of counterfeiting in the three industries over five years. This reduction would bring Australia into a comparable position with New Zealand and the United States:

- Increase in real gross domestic product by around $41 million per year
- Increase in Government tax revenue of $34.4 million per year
- Generation of more than 400 full and part time jobs.

IEAA INTELLECTUAL PROPERTY PRIORITIES

During the Aus/US FTA consultation process IEAA sought the following improvements for the interactive entertainment industry regarding the protection of intellectual property rights to ensure adequate protection for Australian interactive games developers and publishers:

1. Whole of Government response to the counterfeiting and piracy of interactive games;
2. Expansion in effective enforcement against the counterfeiting and piracy of interactive games, specifically –
    a. Improved presumptions relating to copyright subsistence and ownership,
    b. Proof of knowledge amendments in relation to importation and dealing in infringing copies,
    c. Higher penalties for computer games piracy;
3. Legal protection for technological measures to be strengthened;
4. Internet Service Providers and copyright as far as;
    a. Narrowing the provisions that limit ISP liability for copyright infringement; and
    b. Implementation of measures designed to require ISPs to take positive action in response to notices of copyright infringement through mandatory code of practice or legislation;
5. Protection for temporary copies clearly providing that the exclusive rights of reproduction extends to both permanent and temporary copying; and

6. Support for the temporary transfer of personnel to enhance and update practical experience and technological skills.

WHAT WAS AGREED IN THE AUS-US FTA

IEAA agrees with, and has long been arguing for, the need for enhanced intellectual property enforcement, including agreed criminal standards for copyright infringement and on remedies and penalties, as discussed in the IP Chapter.

IEAA is pleased with the Key Points negotiated between Australia and the US in the IP Chapter; however it is not clear in all cases that the specific requirements of IEAA, above, will be translated into legislation.

The first key point in the IP Chapter, "Stronger protection for copyright owners" is of the utmost importance to IEAA; however, consideration to legislation does raise some questions as to the implementation of the Agreement.

To address each point:

- IEAA supports the agreement to implement the WIPO Internet Treaties upon entry into the FTA;
- An expeditious process that allows for copyright owners to engage with ISPs and subscribers to deal with allegedly infringing copyright material on the Internet. IEAA believes this point is fundamental to ensuring strengthened protection for the industry.
- IEAA believes there is an urgent need for tighter controls on circumventing technological protection of copyright material, however is concerned at the addition of "as necessary introducing public interest exceptions in relation to technological protection measures". Depending on the definition of those "exceptions" by including this mechanism, the Government may provide a loop-hole for IP thieves to avoid prosecution. IEAA acknowledges that there would be a transition period to allow the opportunity for public submissions in this area, and will actively participate in those consultations.

It is important to note, as the video and computer games industry is continuously evolving with changing technologies and new technologies becoming available, strong anti-circumvention provisions will become increasingly important as copyright owners in the digital environment rely on technological protection measures to protect their works and reduce counterfeit. The IP Chapter contains a number of provisions, supported by the IEAA, designed to enhance enforcement against circumvention of technological protection measures. These provisions will also bring Australia's anti-circumvention laws into line with those of the US and EU.

According to industry analyst IDC in its recent report "From Den to Digital Home", it is indisputable that take up of online games speeds the penetration of broadband internet, which the Government regards as a desirable objective for the promotion of e-commerce and e-business (attached article "Pick a Box"- the Australian, 30 March 2004). At present, business plans to deliver competitively priced product to consumers online is being inhibited by the lack of ISP liability in Australia.

As interest in online interactive games grows, through accessibility to broadband, ISP liability becomes more of an issue to copyright holders who need protection against internet thieves. A key feature contained in the FTA is the setting up of a notice and takedown regime between ISPs and copyright owners. This regime will provide greater certainty for both copyright owners and ISPs than the current regime in Australia under which ISPs may be liable under the doctrine of authorisation liability but there is no certainty as to what steps they must take in response to a claim that a website hosted by them contains infringing material.

On the whole, the IEAA believes that with carefully drafted legislation, the FTA will strengthen the Australian IP regime benefiting both developers and consumers by allowing economic growth through trade and investment through increased confidence in the protection of copyright and the

industry as a whole.

CONCLUSION

Increased copyright enforcement mechanisms, including ISP liability and increased criminal and civil protection will both deter potential copyright thieves and raise confidence in the industry encouraging economic investment and growth in the local industry.

It was estimated in The Allen Consulting Group report that a reduction in counterfeiting and copyright infringements of just one third would provide an increase of up to 400 full and part time jobs providing further benefit to the community and the local industry. Increased investment in the industry would also assist to prevent the "brain drain" of Australian talent away from our shores and into the international market in the longer term.

The IEAA urges the Committee to recommend adoption of the IP Chapter and its speedy translation into legislation in the interests of both Australian industry and consumers. A secure online copyright regime in line with the EU and the US will benefit both consumers of interactive games and the community as a whole, by accelerating broadband penetration and encouraging further investment into the Australian industry, as will further strengthening of intellectual property laws through increased enforcement and controls.

The Allen Consulting Group

Counterfeiting of Toys, Business Software, and Computer and Video Games

November 2003

Report to the Australian Toy Association, the Business Software Association of Australia and the Interactive Entertainment Association of Australia

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- those firms in the toy, business software and computer and video games industries which provided access to confidential sales and profitability data;
- GfK Marketing Services Australia for their assistance in the provision of industry sales data for the toy and the computer and video games industries; and
- Dr Philip Adams of the Centre for Policy Studies (Monash University) who undertook the general equilibrium modelling.

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Key findings

Counterfeiting is not a victimless crime, and is acknowledged to be a serious problem internationally and in Australia.

The direct costs of counterfeiting are largely borne by the legitimate industries that make and distribute original products. In 2002 counterfeiting resulted in $677 million of lost sales in the Australian toy, software and video games industries. This was comprised of:

- $445.7 million lost sales in the business software industry;
- $100 million lost sales in the computer and video games industry; and
- $131.7 million lost sales in the toy industry.

Conservatively, these lost sales represent $200 million in lost profits.

Costs of counterfeiting are also borne by:

- governments, which lose tax revenue because counterfeiters tend to operate outside the tax net; and
- consumers, who may be deceived into buying non-original and/or inferior goods.

A *one third reduction* in counterfeiting (achieved over five years) in the Australian toy, software and video games industries would have significant macroeconomic benefits:

- real gross domestic product (i.e. national income) will be $41.0 million higher per year than it would otherwise be. In net present value terms, these gains represent a $466.3 million benefit to the Australian economy; and
- real government tax revenue will be $34.4 million higher per year than it would otherwise be. In net present value terms, these gains represent a $487.2 million benefit to Australian governments.

These findings demonstrate the significant national economic benefits associated with vigorous enforcement of Australia's intellectual property rights.

In addition, in the 'financial and business services' sector (i.e. which includes software and games) and 'other manufacturing' sector (i.e. which includes toys) experience:

- an increase of up to 403 full- and part-time jobs; and
- an increase in output of up to $59.5 million per year.

Executive summary

Counterfeiting (commonly called piracy) is the unauthorised duplication of a product protected by one or more intellectual property rights. It may also involve the unauthorised distribution of the counterfeited product, possibly with the intention to deceive the consumer as to the product's authenticity.

It is becoming easier, cheaper and faster to create counterfeit products …

Technological advances have dramatically increased the:

- ease with which counterfeits can be made — counterfeiting technologies have become more accessible to home users as the costs of copying technologies have fallen (e.g. the widespread uptake of CD burners in homes);
- quality of the counterfeit products — copies are increasingly close to being perfect substitutes, if indeed they are not perfect substitutes; and
- speed with which counterfeits can be made — in many instances counterfeit products are available shortly after a legitimate product's release, and in some cases before.

… but it has been difficult to estimate the full impact of counterfeiting …

While the problem of counterfeiting is acknowledged as being serious, estimation of the costs of counterfeiting have been problematic for a number of reasons:

… because it is an illegal activity …

- as an illegal activity, it is clearly difficult to obtain reliable information on the number and value of counterfeit products; and

… and previous studies have had methodological shortcomings

- there is a tendency for estimates of financial losses to be overstated because they:
  - incorrectly assume that every counterfeit represents a lost legitimate sale; and
  - solely report lost sales rather than lost profits.

… but this study has sought to address the previous methodological problems

This study has sought to address such problems via a detailed analysis of previous counterfeiting estimates in Australia and overseas, the use of confidential industry and firm-specific data on sales and profit margins, a survey of 1400 Australian households,[1] and a rigorous methodology that takes into account the impact of price effects.

The cost of counterfeiting

The costs of counterfeiting are substantial and varied …

Contrary to some community misconception, counterfeiting is not a victimless crime.

… legitimate industry loses significant potential sales …

The direct costs of counterfeiting are largely borne by the legitimate industries that make and distribute the original products. Using a traditional measure of the cost of counterfeiting, in 2002 the Australian toy, business software, and computer and video games industries lost gross sales of about $677 million to counterfeit products (shown in the table below).

[1] AC Nielsen, *Piracy Survey 2003* (Sydney: 2003).

LOSS OF GROSS SALES TO LEGITIMATE INDUSTRY PARTICIPANTS ($ MILLIONS)

Industry	Gross sales foregone
Business Software	$445.7
Computer and video games	$100.0
Toys	$131.7
TOTAL	**$677.4**

… and legitimate industry loses substantial profits …

Using a considerably more conservative approach which measures the net cost to firms and attempts to account for price elasticity effects, the foregone profits in the Australian toy, software and video game industries are significant at just under $200 million in 2002.

NET LOSSES TO LEGITIMATE INDUSTRY PARTICIPANTS ($ MILLIONS)

Industry	Suppliers	Retailers
Business Software	$142.5	$11.9
Computer and video games	$21.8	$4.3
Toys	$15.7	$3.5
TOTAL	**$180.0**	**$19.7**

… and these profit losses may be even greater over the longer term …

The estimated profit losses are conservative because if branded products lose value as a result of counterfeiting (i.e. because they come to be seen as less exclusive, or are confused with inferior imitations) then long term profitability may be undermined to a significantly larger extent.

… and additional broader costs also include …

It is important to appreciate that the costs of counterfeiting extend beyond those firms whose products are counterfeited. In particular:

… reduced tax revenue for governments …

- as counterfeiters tend to operate outside the tax net there is a loss of tax revenue for governments; and

… and the deception of consumers

- there are also costs associated with disappointment borne by consumers when they realise that they have non-genuine products (often at the time that the product fails and the consumer seeks redress from the legitimate manufacturer).

Combined, the costs of counterfeiting far exceed any potential benefits

While it can be argued that consumers benefit from counterfeiting because they gain access to goods that they would otherwise have to pay (more) for, this is a short term benefit that needs to be considered in light of longer-term costs. In particular, acceptance of property right violations (even if that acceptance is tacit) undermines the fundamental rule of law that underpins our economy. Thus, as noted by Professor Michael Porter, 'Tolerating piracy produces short term gains for a country but undermines the process of economic upgrading and raising per capita

incomes.'[2] Similarly, *The Economist* notes that 'the costs of counterfeiting far outweigh the benefits'.[3]

The benefits of reducing counterfeiting by a third

Macroeconomic modelling of a one third reduction in counterfeiting …

In order to take a broader view of the economic cost of counterfeiting, an economy-wide model of the Australian economy was used to assess the impact of a one third reduction in counterfeiting in the toy, business software, and computer and video games industries over the next five years.

… using credible assumptions reveals that …

The basic assumptions underpinning the modelling are that a reduction in counterfeiting will:

- shift consumer expenditure from counterfeit products to legitimate products. This will have a slight negative macroeconomic impact, but will increase total government revenue;[4] and
- will increase total investment in the Australian toy, business software, and computer and video games industries. The investment increase reflects the fact that counterfeiters free ride on the investment of legitimate producers, and with more scope to earn profits, legitimate producers will increase their investment in Australia.

… the toy, software and video game industries will increase output and employment …

As would be expected, the toy, software and video game industries would particularly benefit from a one third reduction in counterfeiting:

- employment in the financial and business services sector (i.e. the Australian Bureau of Statistics industry classification that includes software and games) and other manufacturing sector (i.e. the Australian Bureau of Statistics industry classification that includes toys) will increase by up to 403 full- and part-time jobs; and
- output for the financial and business services sector and the other manufacturing sector will increase by up to $59.5 million per year over the longer term.

… and the nation as a whole will experience a positive macroeconomic outcome …

A one third reduction in counterfeiting will have a significant macroeconomic benefit. In particular, real gross domestic product will be $41.0 million higher per year in the longer term. In net present value terms, these gains represent a $466.3 million benefit to the Australian economy.

… and government tax revenue would increases by $20 million per year

In addition, real government tax revenue will be $34.4 million higher per year over the longer term. In net present value terms, these gains represent a $487.2 million benefit to Australian governments.

It is important to appreciate that these modelling results are conservative because they do not capture …

While the MMRF-Green model is a conservative, detailed and robust representation of the Australian economy, such econometric modelling cannot take into account a number of dynamic factors that are important and need to be explicitly acknowledged:

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2 Michael E Porter, *The New Challenge to America's Prosperity: Findings from the Innovation Index* (Washington D.C.: Council on Competitiveness, 1999).

3 "Imitating Property Is Theft," *The Economist*, 15 May 2003, 53.

4 The inclusion of this impact demonstrates the credible nature of the modelling. Such an impact has not been included in some similar overseas modelling work — e.g. Centre for Economics and Business Research, *Impact of Counterfeiting on Four Key Sectors in the European Union and on the European Union Economies* (London: Global Anti-Counterfeiting Group, 2000).

… the benefits of additional consumer confidence …

- a reduction in the prevalence of counterfeits provides greater certainty for consumers as there is a producer that will stand by the legitimate product. This increases consumer confidence in both the products in question and the industry as a whole. This is likely to be particularly important for toys, where there are safety concerns associated with poorly made counterfeits; and

… and the benefits associated with Australia being perceived as a more attractive place for investment

- greater certainty for investors. The maintenance of a strong intellectual property regime (i.e. with an emphasis on enforcement) is particularly important in attracting foreign investment. This is because Australia competes in a world with increasingly mobile capital and that the strength of a country's intellectual property laws is a key determinant in attracting foreign investment across many sectors of the economy. Indeed, the Department of Foreign Affairs and Trade has noted that 'It is generally accepted that maintenance of such a regime has served to attract state-of-the-art technology and overseas copyright works'[5] to Australia.

[5] Department of Foreign Affairs and Trade, *Intellectual Property Rights: A Guide to the GATT Uruguay Round* (Canberra: 1990).

Chapter 1

Introduction

Counterfeiting is perceived to be a significant issue by many firms. However, the full magnitude of the counterfeiting problem has not been clear and, as such, counterfeiting appears to receive less attention than it should from policy-makers and enforcement officials.

In response to this lack of information on the scale of counterfeiting, the Australian Toy Association, the Interactive Entertainment Association of Australia and the Business Software Association of Australia commissioned the preparation of this report. The report's purpose is to identify the industry-specific costs of counterfeiting, and the costs to the Australian economy as a whole.

This study has sought to identify the impact of counterfeiting through a number of means:

- detailed analysis of previous counterfeiting estimates in Australia and overseas;
- the use of confidential industry data on sales and profit margins. This was complemented by a brief survey of toy companies;
- a rigorous methodology that takes into account the impact of price effects (this addresses concerns about some earlier counterfeiting impact studies); and
- sensitivity checking through a survey of 1400 households throughout Australia.[6]

The information obtained from these sources was then used to develop estimates of the likely economic cost of counterfeiting to the industry sectors involved. This, in turn, was used to inform the Group's quantitative modelling of the economy-wide consequences of counterfeiting (i.e. using the MMRF-Green model).

The remainder of this report is structured as follows:

- Part A — Background:
  - chapter 2 defines how the term 'counterfeiting' is used in this report;
  - chapter 3 outlines the nature of costs and benefits that are generally associated with counterfeiting;
- Part B — Counterfeiting's scale and impact:
  - chapter 4 outlines some key issues that need to be addressed when estimating the impact of counterfeiting;
  - chapters 5 to 7 describe the scale and significance of counterfeiting, internationally and for Australia, for each of the three industries. These chapters also include estimates for the likely direct economic cost of counterfeiting for each of those industries in 2002;

[6] AC Nielsen, *Piracy Survey 2003* (Sydney: 2003).

  - chapter 8 incorporates the Group's estimates of the cost of counterfeiting into an economy-wide model in order to identify the broader impacts of counterfeiting.

- Part C — Appendices:
  - appendix A provides some additional information about the MMFR-Green model; and
  - appendix B lists the sources referred to in the body of the report.

Part A

Background

Chapter 2

The nature and definition of counterfeiting

This chapter briefly outlines what is meant by the term 'counterfeiting'.

There is always considerable debate about what precisely constitutes the activities that are commonly referred to as counterfeiting (as well as piracy and like activities).[7]

At its core, counterfeiting is defined by reference to unauthorised use of intellectual property.

The reasons why certain products of intellectual property intensive are produced and exchanged in illegal markets is directly tied to the special economic nature affecting this class of goods. That is, the goods tend to have high fixed costs (e.g. it is expensive to develop the first copy of a video game) and low marginal costs of duplication (e.g. it is relatively inexpensive to make subsequent copies of the same video game). As a result, counterfeiters have an incentive to free ride on the original investment associated with the fixed costs of production by bearing only the marginal costs associated with the production of a counterfeit product.

Such counterfeiting can take place in a number of ways:

- consumers and users can themselves create illegal counterfeit copies (e.g. by burning a copy of a legitimate piece of software or game);
- counterfeiters may undertake the counterfeiting process (often at a scale not possible in a domestic situation); and
- in some situations, counterfeiters are subcontractors of the original producers and may illegally use original production equipment, models and infrastructure. In such a case, counterfeit goods may share the very same quality of the original ones (e.g. when subcontractors overproduce in order to sell part of the production on their own).

While counterfeiting affects a wide range of products and industries, it is possible to characterise and distinguish several specific forms of counterfeiting. That is, different components of intellectual property can be counterfeited (often simultaneously):

- the mark — the counterfeiter can capture the original producer's reputation and branding by copying the relevant trademark;
- the physical expression and design — counterfeiting may also consist of copying and using the idea, the technical conception and the original form of a product. It can be an outright copy (such as a totally duplicated business software application or electronic game), a free adaptation or the simple use of some elements or components of the original; and

[7] See House of Representatives Standing Committee on Legal and Constitutional Affairs, *Cracking Down on Copycats: Enforcement of Copyright in Australia* (Canberra: Parliament of Australia, 2000) 5-6.

- standards and interoperability — in some other cases the core of the copying process does not rely on a form or a particular design but mainly on the interoperability capacity of the product (e.g. that a cartridge works with a particular games console). In this situation, counterfeiters avoid patents, illegally using proprietary standards developed by the original producer in order to protect their markets and their innovations.

Information from the Australian Toy Association reinforces the view that counterfeit products can cover a spectrum of breaches of intellectual property rights:

> Amongst counterfeit toys being sold in the markets and in the discount stores there are those that are a direct copy of the original right down to the name, colours etc. These toys clearly breach copyright and in most cases some form of trademark. Products such as Winnie the Pooh and Power Rangers etc are clearly a breach of the copyright and trademarks of the creators of the product and the Licensors in some instance.[8]

This report is concerned with all forms of intellectual property infringement, and has used the generic term 'counterfeiting' to encompass those activities commonly called counterfeiting, piracy, and so on.

For the purposes of this study, counterfeiting is the unauthorised duplication of a product protected by one or more intellectual property rights. It may also involve the unauthorised distribution of the counterfeited product, possibly with the intention to deceive the consumer as to the product's authenticity.

This definition of counterfeit and counterfeiting excludes:

- legal products that some industry participants nevertheless consider to be counterfeit products (e.g. parallel imports); and
- some forms of dubious business practices that could nevertheless fall foul of state or Commonwealth fair trading laws relating to misleading and/or deceptive conduct:

> Then there are those toys that are manufactured to have the consumer believe that they are buying the real thing or a toy that is associated with the real toy. They do this by the packaging or the look or colours of the product. These toys are possibly in breach of misrepresentation and passing off laws but may not breach trademark or copyright law. Product such as Transforme, Wargreymons, and Wendy Doll etc are clearly aimed to lead the consumer into believing they are getting a Transformer or Barbie Doll etc.[9]

In this way, the terms 'counterfeit' and 'counterfeiting' used in this report are conservative.

[8] Australian Toy Association, *Australian Toy Industry: IP Breaches Project* (Melbourne: 2002).

[9] Ibid.

Chapter 3

Costs and benefits of counterfeiting

This chapter outlines the nature of the costs and benefits that are potentially attributable to counterfeiting activities.

3.1 Costs of counterfeiting

Counterfeiting imposes costs on:

- those companies whose products are counterfeited;
- consumers who knowingly or unknowingly purchase counterfeits that are inferior to the original products; and
- the economy more generally.

These costs are discussed in turn.

Costs to companies whose goods are counterfeited

There are obvious costs to companies in terms of reduced sales as they are forced to compete directly against counterfeiters for market share. In this regard it is important to recognise that the sale of a counterfeit product may not necessarily imply an equivalent loss of a sale of an original unit, and that the total value of any sale revenue forgone is likely to overstate the real cost to the producer of the original product.

There are, however, a range of more subtle costs that are borne by those firms which find themselves competing against counterfeiters — original producers:

- incur significant expense (many millions of dollars in some cases) protecting their intellectual property by conducting investigations and mounting litigation against counterfeiters;
- incur developmental costs associated with designing products that may be more difficult to counterfeit (e.g. copy-protected games, online software activation procedures, etc);
- are subject to depressed prices and reduced sales. There is the cost resulting from the loss of future sales from customers who, having been deceived into buying the inferior counterfeit, are subsequently deterred from any repeat purchasing. Similarly, counterfeits may, by undermining the brand image, drain the cachet of owning the original brand product or otherwise inhibit the ability to charge premium prices.[10] In turn, this too may express itself in the form of lost future sales volumes or price premiums:

[10] This problem (i.e. where there is an information asymmetry and higher quality products are dragged down by lower quality rivals) is famously called the 'market for lemons' problem — see George A Akerlof, "The Market for Lemons: Quality, Uncertainty and the Market Mechanism," *Quarterly Journal of Economics* 84 (1970).

> The problem we face with counterfeit product is that we support the local supplier who has the right to distribute and market the product being copied, but find that other retailers (eg, $2.00 shops, discounters etc) sell the counterfeit product at crazy low prices. This creates the perception in the public that our original product is expensive.
>
> Also, this current year, copies of one of our successful products have been readily available from discount stores at far reduced prices to that we can attain for local suppliers. This puts pressure on our price point.[11]

- in the event that their brand image is undermined, can face a reduction in its intangible assets and market valuation.[12] To that extent it can compound the effects of lost sales and profits and further compromise its ability to access new capital, either equity or debt — and to increase the cost of that capital;
- may find that in markets dominated by counterfeiters, this may create a barrier to entry for their own legitimate products;[13] and
- may, in extreme circumstances, also be forced to withdraw from particular markets and/or territories if the counterfeiting problem is perceived as being especially acute.[14]

As submissions to a recent House of Representatives' inquiry into the enforcement of copyright clearly illustrate, these combined costs are real and a serious matter for industry.[15] A representative comment was provided by Mattel:

> Piracy is of great concern. Not only does Mattel suffer lost sales but the greater concern is the damage to its reputation when legitimate customers, in ignorance, acquire inferior counterfeit articles. The great danger is that counterfeit copies of product may not comply with Australian safety standards. Consumers will be exposed to substantial risks if the counterfeit product is not designed or modified for Australian conditions. The flow on effect is that it is Mattel which will receive the criticism and blame. It is unreasonable to expect consumers to appreciate the subtle differences between a genuine item and a counterfeit item. Indeed, how reasonable is it to expect consumers to ensure that a lower price reflects a failure to comply with Australian standards or a denial of appropriate after sales service?[16]

Finally, official dealers and retailers may also suffer loss of volume throughput and their ability to charge premium prices, and their relationship with the originator company may be placed under stress, with adverse consequences for both.

Costs to consumers

Trademarks provide valuable information to consumers in a number of ways (e.g. that the good is the product of the manufacturer in question; that the purchase at one time will be the same as the purchase at another time; to avoid confusion among consumers, and reducing consumer search costs). In the presence of counterfeiting, these gains may be foregone.[17]

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11 Response to email survey of Australian Toy Association members.

12 Organisation for Economic Co-operation and Development, *The Economic Impact of Counterfeiting* (Paris: OECD, 1998) 22.

13 Ibid.

14 See Voorhaar, "Victims of Counterfeit Want Heads to Roll," *Business Review Weekly*, 6 April 2003.

15 See House of Representatives Standing Committee on Legal and Constitutional Affairs, *Cracking Down on Copycats: Enforcement of Copyright in Australia* (Canberra: Parliament of Australia, 2000).

16 Mattel submission to the House of Representatives' Committee of inquiry into the enforcement of copyright (reported in November 2000).

17 D Bosworth and D Yang, "The Economics and Management of Global Counterfeiting" (paper presented at the Sixth World Congress on Intellectual Capital and Innovation, September 2002).

Consumers can be harmed by counterfeit products when they buy poor quality goods at an excessive price. In some cases, counterfeit products pose serious health or safety risks to the individual (e.g. with respect to toys for children) and the public generally.[18] The nature of these counterfeit products is such that consumers are generally left without any legal recourse when they are financially or physically injured by these products.

Moreover, to the extent that counterfeiting threatens the commercial future of the genuine producer, rampant counterfeiting may see the withdrawal of some products and the subsequent restriction of consumer choice.

Costs to the broader economy

Where genuine articles manufactured locally directly compete with counterfeits produced overseas and imported, Australia as a whole will experience a loss in output and jobs to the extent those imports displace local sales of genuine goods. Exports are also affected directly, as companies have to compete with counterfeit goods at home and abroad.

In addition, where counterfeit products produced in Australia are of poor quality they may taint overseas consumers' perceptions of the quality of genuine goods made in Australia. This can result in lost export sales and lower levels of economic activity in Australia more generally.

In addition, to some degree, counterfeiting is likely to have links to organised crime attracted by the large profits in this illicit trade, exacerbating the scale and scope of the problem. This problem is acknowledged by Interpol:

> This particular area of crime [Intellectual Property (IP)] covers an array of offences from Trade Mark and Patent Right infringements, to software piracy, and affects a vast product range from medicines to air craft and vehicle spare parts, from clothing to music CD's and computer software.
>
> IP crimes, whether of counterfeited clothes, medicines or CD's, costs hundreds of billions of US $ globally every year.
>
> The effects of this crime range from threats to public health and safety to loss of government revenues, along with the extensive damage done to legitimate businesses and trade.
>
> Interpol has recognised the extensive involvement of organised crime and terrorist groups in IP crimes. At the Interpol General Assembly at Rhodes in the year 2000, a resolution on IP crime was adopted (AGN/69/RES/6). It clearly mandated the Interpol General Secretariat to take action not only aimed at raising awareness of the problem, but also to provide a strategic plan in close co-operation with private industry.[19]

Counterfeiting will also tend to reduce tax revenue for governments through its effect on reducing the value of sales and profits of genuine producers. Moreover, since manufacturers of counterfeit goods frequently operate in the 'black economy', counterfeiting is likely to further reduce tax revenues from undeclared corporate, indirect and income tax. This will tend to result in reduced government spending or higher taxes than otherwise for legitimate businesses.

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[18] Organisation for Economic Co-operation and Development, *The Economic Impact of Counterfeiting* (Paris: OECD, 1998).

[19] Interpol, *Intellectual Property Crime* (2003 [cited 11 August 2003]); available from http://www.interpol.int/Public/FinancialCrime/IntellectualProperty/Default.asp.

Finally, Australia might suffer in quite indirect ways. Where counterfeiting is rife, producers of reputable products may become reluctant to manufacture their products in those countries. To the extent this holds for Australia, Australia may lose out on foreign direct investment and the foreign know-how that is associated with that investment. As modern economic thought considers such foreign direct investment is responsible for positive productivity spillovers to the economy, counterfeiting can limit the benefits from this that Australia may have otherwise gained. As Michael Porter has concluded 'Tolerating piracy produces short-term gains for a country but undermines the process of economic upgrading and raising per capita incomes.'[20]

3.2 Benefits of counterfeiting

Whilst clearly there are many losses from counterfeiting there are also potentially some gains that might be considered.

For the producer, in some cases counterfeiting may increase demand for the original product, resulting in overall higher demand and sales than would otherwise occur.[21] This is most likely where there are significant network externalities for the product. It may also occur where it has what Liebowitz has called an 'exposure effect' — a form of advertising or sampling that might lead to larger sales of the legitimate version.[22]

However, recent empirical and theoretical work casts doubt on the validity of the view that externalities from counterfeiting will lead to a net increase in demand for original products (see box 3.1, next page).

For consumers, those unable to buy the genuine goods at the full price may gain utility from buying counterfeit goods at a lower cost, assuming that quality is sufficiently high. This benefit may potentially be significant, but the difficulty of calculating a demand curve for the counterfeit product places this calculation out of the scope of this report.

However, in some cases consumers will be buying counterfeit products in the full knowledge that they are counterfeits. In such cases, those goods might fill a gap at the lower end of the income distribution for those who cannot afford the genuine product. Such cases may also not compete in any way with the genuine goods and so not result in any loss of sales volume, erosion of prices or producer reputation. Bosworth and Yang[23] argue that the supply of counterfeit goods in these circumstances may in fact be welfare enhancing. This issue highlights the difference between deceptive and non-deceptive counterfeits.

[20] Michael E Porter, *The New Challenge to America's Prosperity: Findings from the Innovation Index* (Washington D.C.: Council on Competitiveness, 1999) 58.

[21] See for example, K R Conner and R P Rumelt, "Software Piracy: An Analysis of Protection Strategies," *Management Science* 37, no. 2 (1991); J Slive and D Bernhardt, "Pirated for Profit," *Canadian Journal of Economics* 31, no. 4 (1998).

[22] S Liebowitz, "Copyright, Piracy and Fair Use in the Networked Age," (2002).

[23] D Bosworth and D Yang, "The Economics and Management of Global Counterfeiting" (paper presented at the Sixth World Congress on Intellectual Capital and Innovation, September 2002).

Box 3.1

CAN COUNTERFEITING IN THE PRESENCE OF NETWORK EXTERNALITIES PROVIDE NET BENEFITS FOR INTELLECTUAL PROPERTY OWNERS?

A number of reasons have been presented in the economic literature on why counterfeiting might be of net benefit to legitimate producers — particularly for information products such as software. These have variously been ascribed to demand-side or network externalities[24].

Because counterfeiting increases the user base of the product (e.g. from the supply of copies to others and sharing among peer users), counterfeiting may mean non-counterfeiters are willing to buy and pay more. By allowing some counterfeiting, the seller can raise the price to paying customers and more than make up for any lost sales. Alternatively, counterfeiting can be a commitment device of a firm. Allowing counterfeiting today can help to establish its product as an industry standard in the future. Finally, counterfeiting can be used strategically as a device to undermine the appeal and market share of competitors.

Moreover, some people may be stimulated to consume the same item as others, while some counterfeited products may benefit from direct and indirect network externalities. For example, indirect externalities may arise in that, by increasing the provision of electronic games, higher counterfeiting might increase the ownership of the platforms they operate on, which in turn stimulates the demand for legitimate games.

Thus, while counterfeiting erodes legitimate demand as potential buyers switch to counterfeited products, it may also increase legitimate demand by inducing more people to buy and raising their willingness to pay. The balance of these effects is an empirical question.

Recent work, though, has cast doubt on the validity of these arguments.

The work of Hui and Png,[25] testing demand externalities for music CDs, has shown that the positive influences of counterfeiting, if they exist, do not outweigh the direct substitution of counterfeited for legitimate CDs. Their studies found that a one-unit increase in music CD counterfeiting was associated with a 0.42 unit (or 42 per cent of the counterfeit sales) reduction in demand for legitimate music CDs. The demand for legitimate products clearly decreased with counterfeiting, suggesting 'theft' outweighed the 'positive' effects of counterfeiting — although not by a simple one for one reduction commonly ascribed to losses resulting from counterfeiting.

King and Lampe[26] have similarly cast doubt on the 'profitable counterfeiting' theory. Their work has shown that the concept depends critically on certain assumptions, and that counterfeiting is at best an inferior alternative to price discrimination. Further, unless there is reason to believe that potential counterfeiters will systematically value a product less than other buyers and that there are relatively few counterfeiters, then allowing intellectual property rights to be degraded will not be in the firm's interests.

Source: Derived from articles by Hui and Png, "Piracy and the Legitimate Demand for Recorded Music," 2003; King and Lampe, *Network Externalities and the Myth of Profitable Piracy*, 2002; Miller, "The Economics of Software Piracy," http://users.ntplx.net/~dmiller/papers/piracy/piracy.htm.

Finally, the production and distribution of counterfeit products is an economic activity in itself and, as such, does provide some benefits to the overall economy of the country where it takes place. Accordingly, this activity could be considered as an offsetting 'benefit' when assessing the net impact of counterfeiting on the economy.

[24] In networking, there is a principle known as Metcalfe's Law, named after Robert Metcalfe, the designer of Ethernet and founder of 3Com, which states that the value of a network grows in direct proportion to the square of its size. Therefore, the more users that a software publisher gets using its software, the more that it will find that people want the product itself, and of course the more people that want ancillary products and services — D Miller, *The Economics of Software Piracy* ([cited 11 September 2003]); available from http://users.ntplx.net/~dmiller/papers/piracy/piracy.htm.

[25] K L Hui and I P L Png, "Piracy and the Legitimate Demand for Recorded Music," *Contributions to Economic Analysis & Policy* 2, no. 1 (2003).

[26] S P King and R Lampe, *Network Externalities and the Myth of Profitable Piracy, Working Paper No. 03/02* (Melbourne: Intellectual Property Research Institute of Australia, 2002).

3.3 The net impact

The Economist correctly notes that 'the costs of counterfeiting far outweigh the benefits'.[27]

While it can be argued that consumers benefit from counterfeiting because they gain access to goods that they would otherwise have to pay (more) for, this is a short term benefit that needs to be considered in light of:

- the significant costs to legitimate industry; and
- the longer-term costs. In particular, acceptance of property right violations (even if that acceptance is tacit) undermines the fundamental rule of law that underpins our economy. Thus, as noted by Professor Michael Porter, 'Tolerating piracy produces short term gains for a country but undermines the process of economic upgrading and raising per capita incomes.'[28]

[27] "Imitating Property Is Theft," *The Economist*, 15 May 2003, 53.

[28] Michael E Porter, *The New Challenge to America's Prosperity: Findings from the Innovation Index* (Washington D.C.: Council on Competitiveness, 1999).

Part B

Counterfeiting's scale and impact

Chapter 4

Estimating industry losses

This chapter acts as an introduction to part B of this report. It provides a brief overview to the methodological problems associated with the development of credible estimates for the impact of counterfeiting.

Over the course of the past two decades, intellectual property owners have witnessed an explosion in the levels of counterfeiting, in both the domestic and international arenas. Due to today's sophisticated global economy — with its easy and widespread access to technological advances such as computers, copiers and scanners — there are virtually no product lines, corporations, or consumers that escape the reach of counterfeiters.[29]

Despite these accepted changes, as the following chapters show, there has been an ongoing difficulty in developing credible estimates of the impact of counterfeiting.

The first issue is to determine the size of the legitimate industry. This is problematic for a number of reasons:

- the Australian Bureau of Statistics data on the three industries addressed in this study (i.e. toys, business software, and computer and video games) are very poor. The lack of industry detail reflects the dominant traditional industry classifications and individual framework that inadequately reflects the increasing importance of intellectual property-based industries; and
- general private sector information providers have widely varying estimates as to industry size. For example, IBIS estimates that the toy industry in Australia is worth about $610 million,[30] whereas GfK Marketing Services Australia data (modified to account for the estimated size of its collection) suggests that the market is worth about $1 billion.

To address these basic data problems reliance has been placed upon information (volumes and values) provided by:

- the Business Software Alliance, and correlated with confidential data supplied by members of the Business Software Association of Australia; and
- GfK Marketing Services Australia for both the toy and the computer and video games industries. This information, which has the endorsement of the toy and the computer and video games industries was complimented by confidential data supplied by individual firms.

[29] See International AntiCounterfeiting Coalition, *International/Global Intellectual Property Theft: Links to Terrorism and Terrorist Organisations, White Paper* (Washington D.C.: 2003).

[30] See N Shoebridge, "Selling Toys Isn't Child's Play," *Australian Financial Review* 2003.

The second issue is to identify the scale of the industry that is comprised of counterfeit products. All of the qualitative evidence points to the enormous magnitude and the important implications of counterfeiting activity.[31] However, there are two inter-related problems in quantifying the scale of counterfeiting activity:

- firstly, 'There is no single or official body that compiles statistics on copyright infringement in Australia. In this regard Australian practice is not unusual; AGD [the Attorney General's Department] stated that it knew of no government anywhere in the world which has independent statistics or analysis of the level of copyright piracy';[32] and
- as a result, secondly:

> A serious problem with studying the infringement of IPR [Intellectual Property Rights] is the almost total lack of reliable data. This is a particularly important problem with trademarked and copyrighted goods. This unsurprising fact arises essentially from the clandestine conditions under which counterfeits of copyrighted and trademarked goods are produced and distributed. Manufacturers of counterfeit goods almost never record their activities or register with the authorities for tax purposes (OECD, 1998b). Indeed, organised crime units are believed to be responsible for much counterfeit activity. Such goods are often sold on "grey markets" alongside genuine products, over-runs, recycled goods, copies and stolen products. Moreover, even the genuine manufacturers of such products often do not have specific enforcement departments within their organisations, meaning that efforts to curtail infringement are often dispersed across finance, marketing and legal divisions with no easily measurable or identifiable budget attributable directly to enforcement. Because of these features of counterfeit products, there are no comprehensive or reliable statistics available.[33]

Given these potential problems, a number of approaches have been used to develop realistic estimates of the counterfeiting rates:

- we have undertaken detailed analysis of previous counterfeiting estimates in Australia and overseas;
- an informal poll of Australian Toy Association members was taken to gauge industry perceptions as to the nature, incidence and scale of counterfeiting in Australia;
- members of the Australian Toy Association, the Business Software Association of Australia and the Interactive Entertainment Association of Australia were canvassed to supply confidential information on their sales and margins, and evidence of counterfeiting they were subject to; and
- a survey of 1400 Australian households was commissioned to provide a check against previous counterfeiting estimates.[34]

The standard industry claim has generally been that every counterfeited product represents an equivalent lost sale. For example, IDC claims that:

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31 D Bosworth and D Yang, "The Economics and Management of Global Counterfeiting" (paper presented at the Sixth World Congress on Intellectual Capital and Innovation, September 2002).

32 See House of Representatives Standing Committee on Legal and Constitutional Affairs, *Cracking Down on Copycats: Enforcement of Copyright in Australia* (Canberra: Parliament of Australia, 2000) 12.

33 P Dixon and C Greenhalgh, *The Economics of Intellectual Property: A Review to Identify Themes for Future Research* (Oxford: 2002) 27.

34 AC Nielsen, *Piracy Survey 2003* (Sydney: 2003).

> While not every piece of formerly pirated software will be purchased if piracy rates go down — some will be substituted, some not used — at the same time lower piracy rates yield more economic activity that stimulates more software production and purchase. The two countervailing forces seem to cancel each other out. *This is the conventional assumption for most previously published piracy studies.*[35]

This report, however, has taken a different and considerably more conservative approach to determining the cost of counterfeiting.

It has started with a traditional measure of the potential gross impact on sales resulting from the estimated rate of counterfeiting prevalent in each of those industries.

The aggregate gross value of lost sales derived in this manner has then been adjusted to reflect the weighted loss of sales margins of the firms in the industry (supplied by a survey of the toy, business software, and computer and video games industries). This has been done in order to derive a value of the net revenue (i.e. profit) at risk for sales lost to counterfeit products.

In addition, potential losses were also adjusted to account for the likelihood that not every acquired counterfeit product is a complete substitute for the sale of an original product at full price. In applying this price effect, the Group has been guided by the results of the national household survey commissioned for this study.[36] Among other matters, that survey provided some insights into the likely price elasticities for the purchase of counterfeit products.

The resulting estimate is, accordingly, a very conservative estimate, but is none-the-less one particularly reflective of the cost of foregone profits for the industries concerned.

[35] IDC, *Expanding Global Economies: The Benefits of Reducing Software Piracy* (BSA, 2003) 22. Emphasis in original.

[36] AC Nielsen, *Piracy Survey 2003* (Sydney: 2003).

Chapter 5
Toys

This chapter outlines the scale and nature of counterfeiting in the toy industry.

5.1 International experience

Counterfeiting of toys is slightly different from 'normal' trademark infringement. It often happens that the design of the product is copied and sold under a similar, but not identical, trademark. This is harder to combat for the trademark owners, especially in Asia where design protection is not as strong as trademark protection.

In 1998, the Organisation for Economic Cooperation and Development (OECD) released a report containing a comprehensive overview of the effect of counterfeiting on industry worldwide.[37] Included in that report was the qualified assessment that for toys, counterfeit products account for around 12 per cent of the European toy market.

According to a year 2000 report which looked at the trade in counterfeit goods in toys and sports equipment in the European Union (as part of a study of four particular industries):

> counterfeiting has a serious impact on the revenues, profits and investment levels of the four sectors studied. Counterfeiting reduces company revenues, stifles investment and innovation, and retards economic growth. Its final effects on the general economy are observed directly through job losses and reduced gross domestic product.[38]

The study found that, of the four industries reviewed (i.e. clothing and footwear perfume and toiletries, toys and sports, and pharmaceuticals), the toys and sports equipment industries were proportionately the most severely affected in terms of revenue loss (see table 5.1).

Table 5.1

ESTIMATES OF REVENUE LOSS DUE TO COUNTERFEITING (1998)

Industry	Percentage of total revenue	Total loss of revenue (€ billions)
Clothing and Footwear	3.2	7.581
Perfume and Toiletries	7.2	3.017
Toys and Sports	11.5	3.731
Pharmaceuticals	5.8	1.554

Source: Centre for Economics and Business Research, *Impact of counterfeiting on four key sectors in the European Union and on the European Union economies*, (London: Global Anti-Counterfeiting Group, 2000).

[37] Organisation for Economic Co-operation and Development, *The Economic Impact of Counterfeiting* (Paris: OECD, 1998).

[38] Centre for Economics and Business Research, *Impact of Counterfeiting on Four Key Sectors in the European Union and on the European Union Economies* (London: Global Anti-Counterfeiting Group, 2000).

More recent evidence suggests the problem is not getting better. For example, European Union customs statistics for 2000 show that between 1999 and 2000, the number of games and toy industry objects seized by customs administrations increased by 94 per cent.[39] In 2002, the International Council of Toy Industries noted that in some countries more than 20 per cent of goods in the market place are estimated to be counterfeit.[40] And more recent estimates for Europe, released by the International Council of Toy Industries in 2003, suggest that one toy in ten is counterfeit, inflicting an estimated loss of €1.5 billion on the toy industry.[41]

These estimates, while clearly pointing to a problem of serious scale, must be treated with caution, as toys are among the products that are particularly problematic for identifying the level of counterfeiting.

> Finally, there is a group of products where no method will deliver a wholly satisfactory measure of counterfeiting and piracy. For these products, a significant proportion of counterfeits are likely to be production overruns. This is where production runs by authorised manufacturers have exceeded the number permitted by the brand owner, and the excess is distributed illicitly. Unfortunately, production overruns are virtually impossible to identify once they have become freely distributed.
>
> The final group of products includes: …Toys and games.[42]

Not only does counterfeiting of toys cause financial losses, more importantly it often creates serious health and safety risks to small children.

5.2 Australian estimates

Although there are no official statistics, which describe the scale of toy counterfeiting in Australia, available information suggests that here, too it is a problem of comparable magnitude to that in Europe.

Evidence to the House of Representatives inquiry into the enforcement of copyright indicated the problem in Australia to that time was widespread and of a scale to be of serious concern to local producers and distributors.[43] For example Mattel noted that:

> It is difficult to assess the extent of piracy. Invariably knowledge of counterfeit copies being in the market comes too late. Knowledge of such a situation will arise when complaints are made by a consumer or when a retailer is threatened by a competitor who is selling the counterfeit copies. In such circumstances, even if it is possible to identify the offender, private legal action is merely an 'after the event' remedy.
>
> In more recent times there are abundant examples of piracy having occurred with Mattel product in Australia. Its now wholly owned division of Tyco and Croner Toys were the licensees of the 'Teenage Mutant Ninja Turtle' range of products in Australia which came onto the market in the early '90s. The extent of piracy was so heavy that Croner Tyco was required to obtain Federal Court orders in five different States around Australia. In excess of $200 000 was expended merely to restrain black-market pirates from marketing product, namely toys and t-shirts, throughout Australia.

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39 European Commission, *An Evolving Problem: The Nature of Counterfeit Goods* ([cited 4 August 2003]); available from http://europa.eu.int/comm/taxation_customs/customs/counterfeit_piracy/counterfeit2_en.htm.

40 International Council of Toy Industries, *Toy Factory Auditing Process Launched Worldwide* (12 June 2002 [cited 5 August 2003]); available from http://www.toy-icti.org/newsinfo/061202_actions.htm.

41 Toy Industries of Europe, "Infobrief No. 26," (Brussels: 2003).

42 Centre for Economics and Business Research, *Countering Counterfeits: Defining a Method to Collect, Analyse and Compare Data on Counterfeiting and Piracy in the Single Market* (London: European Commission Directorate-General Single Market, 2002).

43 See House of Representatives Standing Committee on Legal and Constitutional Affairs, *Cracking Down on Copycats: Enforcement of Copyright in Australia* (Canberra: Parliament of Australia, 2000) 12.

> In more recent times the pirate importers have turned their interests to the leading item within the Mattel range and the number one toy item in the world, namely the Barbie Doll range. The Barbie Doll range enjoyed its fortieth Birthday in 1999 and is now the subject of piracy imports throughout the world. From September 1998 to this time, Mattel has had to pursue five different piracy actions against people importing illegal pirated product into Australia alone. In 1998 Mattel had to take action against importers of product who had stolen packaging from a factory in China and placed fake Barbie Dolls in the packaging for sale in markets throughout Australia. In 1999 Federal Court proceedings had to be issued against importers of exact knock-off pirate product known as 'Gloria' which in every other respect replicated a large range of products within the Barbie range. These proceedings were successful in the Federal Court. However they were only successful after huge expenditure was incurred which has not been able to be recovered.[44]

More recently, the Australian Toy Association sought to identify the potential size and scope of breaches of intellectual property faced by the Australian toy industry. To that end the Association conducted a sample survey in late 2001 of the more than 1600 markets and some 1700 discount stores operating in Australia (see table 5.2).[45] That survey found toys were sold in 80 per cent of those markets (with an average of 7.6 stalls per market) and in every discount store.

Table 5.2

INTELLECTUAL PROPERTY BREACHES AT NON-TRADITIONAL RETAIL OUTLETS AND DISCOUNT STORES, (2001)

Area	Stalls/stores visited	ATA breaches found in the sample group	Percentage
Market visits			
Victoria	409	258	63.1
New South Wales	232	101	43.5
Queensland	67	15	22.4
Total	**708**	**374**	**52.8**
Discount store visits			
Victoria	147	76	51.8
New South Wales	64	35	54.7
Queensland	26	10	38.5
Total	**237**	**121**	**51.1**
Total market stalls and discount stores	***945***	***495***	***52.4***

Source: Australian Toy Association, *Australian Toy Industry: IP Breaches Project*, 2002.

[44] Mattel submission to House of Representatives inquiry into enforcement of copyright.

[45] Australian Toy Association, *Australian Toy Industry: IP Breaches Project* (Melbourne: 2002).

The survey results suggested that some 9700 market stalls were selling toys and, of these, around 52 per cent were selling toys that potentially breached the copyright or trade mark of companies in the legitimate toy industry. The average price point of the toys sold from these stalls was around $6.00 compared with the recommended retail price of the target products of between $9.90 and $49.99. Among discount stores, around 51 per cent of stores examined were selling suspected counterfeit copies of the goods targeted. Although the price of toys sold varied substantially, the average price was around $9.00, while the average recommended retail price would generally range from $9.90 to $49.99.

As it was not possible to directly identify the volume and value of sales of toys from these outlets, the Association estimated these. It did so by estimating the average number of products for sale and applying to that an estimated stock turnover rate and average equivalent retail price.

Evidence from this survey also strongly suggested that the vast majority of toys breaching intellectual property rights derive from production overseas (particularly from China, Thailand and Taiwan) and are imported into Australia where they then subsequently enter the wholesale or retail distribution chain.[46]

The Association concluded from its survey results that:

- the sale of toys through 'non traditional retail outlets' and companies not associated with major toy companies at a wholesale level in Australia is widespread;
- the toys are being sold in large quantities (with estimated total sales from these outlets around $266 million per year); and
- there are a significant number of toys being sold that appear to breach intellectual property rights of the originator companies.

While no direct estimate of likely sales of counterfeited toys is possible from these results — that would require identifying the percentage of toys sold that were suspect rather than just the proportion of stores selling them — it is nonetheless a worrying indicator that around 52 per cent of non-traditional outlets and discount stores appear to endorse the sale of products that breach copyright.

Responses to a survey of Australian Toy Association members conducted in mid-2003 for this study endorsed the view that the major source of counterfeit product in Australia originated from unlicensed production overseas, imported and sold in non-traditional outlets such as markets and 'two dollar shops'.[47]

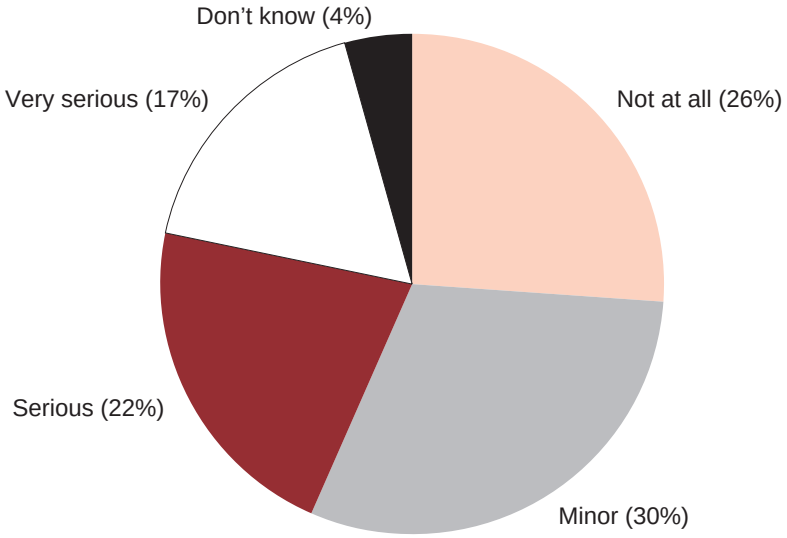
The survey of members was revealing in that it *prima facie* showed a fair degree of ambivalence towards the problem of counterfeiting (see figure 5.1).

[46] Ibid. 6.

[47] Those responses also indicated that production over-runs of otherwise legitimately manufactured originals were considered an insignificant channel of counterfeit products in the Australian market.

Figure 5.1

CATEGORISATION OF THE HARM CAUSED BY COUNTERFEITING ON TOY COMPANIES



Source: Industry survey.

However, when weighted by firm sales the survey results are significantly more worrying. Once such a weighting is applied, the 'serious' and 'very serious' responses account for 80 per cent of respondents' sales.

The household survey conducted for this study found that only 3 per cent of households acquired toys that they believed or suspected to have been counterfeit.[48] This is very low in comparison to previous estimates, and likely reflects:

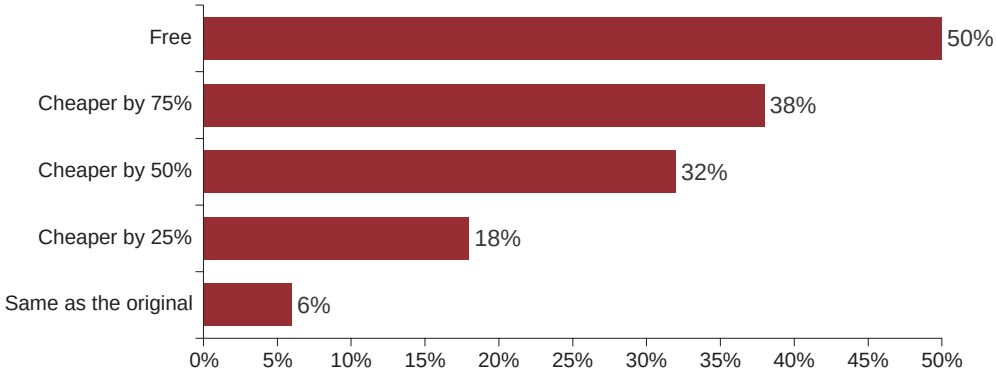
- the natural tendency to under-state what is an illegal purchase; and
- the fact that where counterfeit toys are purchased from retail stores they would have a sense of authenticity about them (i.e. it is likely that many consumers are deceived into thinking that the counterfeit product is indeed legitimate).

Although the survey suggests that household purchasing of counterfeit toys is relatively low, it reveals a worrying indication regarding households' propensity to purchase counterfeit products. Figure 5.2 demonstrates that 38 per cent would knowingly purchase counterfeit toys if they were priced with at least a 75 per cent discount to the original. More relevantly, given the pricing relativities presented earlier from the Australian Toy Association survey, 32 per cent of people would acquire a counterfeit product with a discount of 50 per cent or less.

[48] AC Nielsen, *Piracy Survey 2003* (Sydney: 2003).

Figure 5.2

PERCENTAGE OF PEOPLE WHO WOULD KNOWINGLY ACQUIRE COUNTERFEITED TOYS AT VARYING PRICE POINTS FOR THE COUNTERFEITED TOYS



Source: AC Nielsen, *Piracy Survey 2003*, 2003.

The Allen Consulting Group has compiled its own estimate of the extent and cost of counterfeiting to the Australian toy industry for the year to end-December 2002.

This has been assembled using data from GfK Marketing Australia for retail toy sales, augmented with confidential sales data and information on sales margins from members of the ATA. The estimates are partly derived from the likely incidence of counterfeiting reported for the European Union (i.e. 11.5 per cent).

They have, however, been adjusted:

- to account for information on the scale of counterfeiting provided from an email survey of Australian Toy Association members (where respondents accounted for over 65 per cent of the value of Australian sales); and
- in the light of data on the acquisition of counterfeit goods by households, obtained from a national survey conducted in mid-2003.

In compiling its estimates, the account has been taken of the effects of elasticity of demand for products (in simple terms a buyer of a counterfeit toy at $5.00 may not necessarily also be prepared to buy the original toy at its full price of $20.00). In this regard, assistance was provided by the results of the national survey shown in figure 5.2.

Using the traditional measure of the cost of counterfeiting, the effect of counterfeiting has potentially reduced gross sales in the toys industry by some $132 million.

However, using a more conservative estimate which reflects weighted average margins (or profitability) foregone of firms across the industry and an adjustment to account for the elasticity of demand for counterfeit products, the Group estimates that the direct net revenue forgone to the Australian toy industry (producers, wholesalers and retailers) for 2002 was of the order of $20 million.

It should be stressed that this does not represent the total sales lost to counterfeit toys, rather it is the net revenue lost to the industry.

Key Findings

1. Lost sales from counterfeiting potentially cost the toy industry around $132 million in gross sales in 2002.
2. Adjusted for price effects and sales margins, toy suppliers lost $15.7 million in foregone profits in 2002 due to counterfeiting.
3. Adjusted for price effects and sales margins, toy retailers lost $3.5 million in foregone profits in 2002 due to counterfeiting.

Chapter 6

Business software

This chapter outlines the scale and nature of counterfeiting in the software industry.

Globally, counterfeiting of business software is rife, facilitated by the rapid growth of the means of duplicating that software, such as CD burners and the spread of hacks and registration numbers available through the Internet.

The various forms of counterfeiting of business software (which includes operating systems and business applications) and where they might occur in the chain from producer to final consumer are summarised in box 6.1.

Box 6.1

FORMS OF INTELLECTUAL PROPERTY THEFT OF SOFTWARE

Software can be counterfeited in any of a number of ways including: end-user copying, hard disk loading, counterfeiting, and illegal downloads from the Internet.

End-user copying

This is what many people probably think of when they think of software copying. It includes the college student 'loaning' his copy of a software game or application program to his dorm mates to copy and return, or the business person copying a legally installed program from work onto a CD and taking it home to load onto his personal PC for private use. End-user copying also occurs when a company or individual installs software on more machines than they have licences for. The bulk of this form of piracy actually occurs in organisations rather than among consumers.

Hard-disk loading

This form of counterfeiting occurs where computer systems builders and resellers pre-install illegal copies of software onto PCs prior to sale. Dealers use one legally acquired copy but install it on many machines. These PCs are commonly sold as low cost packages without any form of licensing documentation or disks.

Formal duplication

Formal duplication is the illegal duplication and sale of copyrighted software, often in a form designed to make the product appear to be legitimate. Unlike either end-user copying or hard disk loading, this involves a blatant attempt to mislead the potential buyer into thinking that he is purchasing a legitimate piece of software and, along with it, the rights to what-ever support and future upgrades might normally be associated with it. It also encompasses the creation of 'compilation CDs' that contain pirated versions of a number of software programs.

Downloads

This form of piracy occurs when copyrighted software is down-loaded from the Internet without the express permission of the copyright owner. This form of theft will only grow as use of the Internet becomes more widespread and the number of sites that archive illegal copies of software made available for download grows.

Source: Levins, "The Global Threat of Software Piracy," 1999; Microsoft, *Asia's Intellectual Capital: The Challenges Ahead*, 2002 8.

While it is clear that counterfeiting occurs within the manufacturing, wholesaling and retailing chain (e.g. hard disk loading by distributors), of increasing significance is the personal copying of software, exacerbated by the substantial problem of original works being copied and distributed online:

> Intellectual property is particularly vital in the emerging digital world. Digitisation and the Internet have made it easy to make pristine copies of protected works and to distribute these copies to an online audience of millions. The economic losses suffered by authors and other creators as a result of online piracy — whether the work is copied only temporarily or more permanently — is staggering.[49]

This form of counterfeiting has grown dramatically in recent years:

> An estimated 2 million Web pages offer, link to or otherwise reference 'warez' software — the Internet code for pirated software. This number represents a 100 per cent increase in pirate Web sites in the past year alone, and a 2000 per cent increase over the past 3 years.[50]

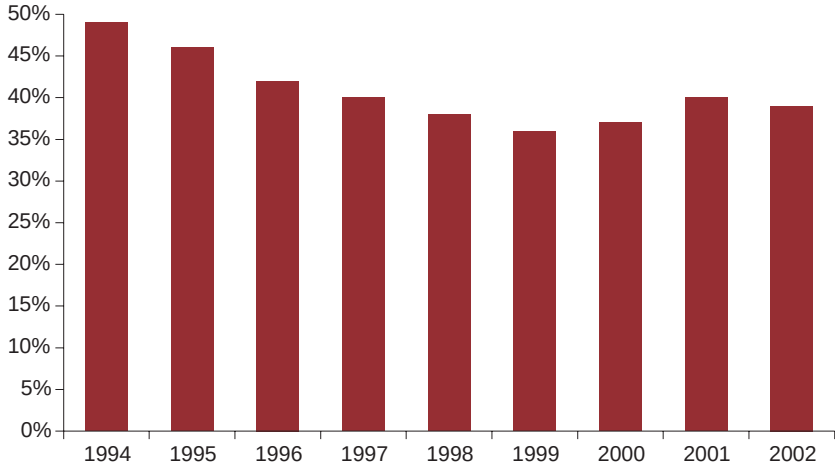
6.1 International experience

Unlike other areas of counterfeiting, comprehensive information on the scale of the problem internationally is available from studies of global piracy (i.e. counterfeiting) commissioned by the Business Software Alliance (BSA) which have been conducted annually since 1994. These studies, which are widely used in official publications, estimate worldwide business software piracy rates,[51] the associated dollar losses and trends.

The latest BSA global software piracy study indicates that the global piracy rate has fallen significantly over the last eight years, from 49 per cent in 1994 to 39 per cent in 2002 (illustrated in figure 6.1). However, despite that progress, the current level of software piracy remains a serious issue for the software industry.

Figure 6.1

WORLD BUSINESS SOFTWARE PIRACY RATE



Source: International Planning and Research Corporation, *Eighth Annual BSA Global Software Piracy Study: Trends in Software Piracy 1994–2002*, 2003.

As shown in figure 6.2, on a regional basis, North America and Western Europe have the lowest rates of piracy, while Eastern Europe has the highest rate (as has been the case in every study since 1994).

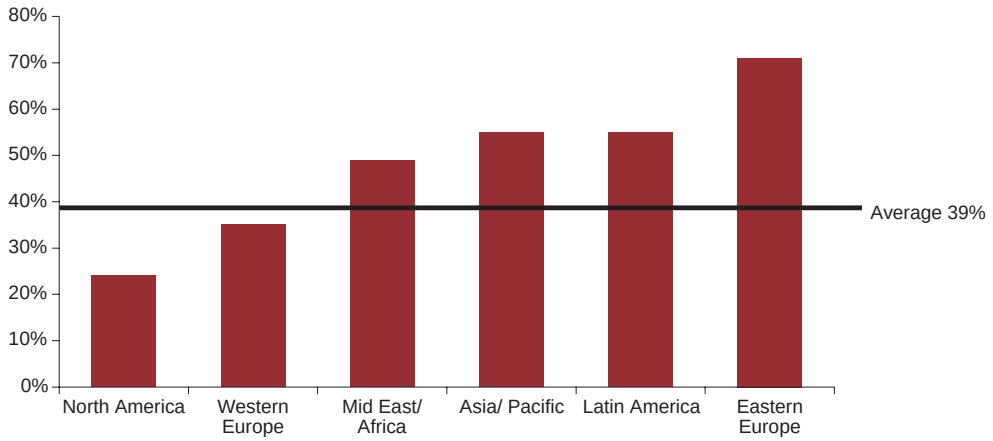
[49] Microsoft, *Creating a Vibrant Information Technology Sector: Growth, Opportunity and Partnership, White Paper* (2002) 24.

[50] Microsoft, *Asia's Intellectual Capital: The Challenges Ahead* (2002) 8.

[51] Software piracy is measured as the amount of business application software installed without a license.

Figure 6.2

PIRACY RATE BY REGION (2002)

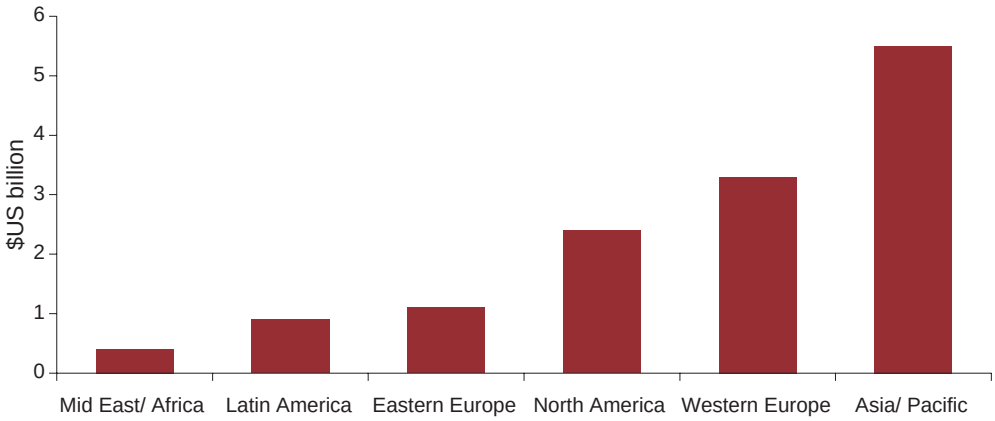


Source: International Planning and Research Corporation, *Eighth Annual BSA Global Software Piracy Study: Trends in Software Piracy 1994–2002*, 2003.

As shown in figure 6.3, the BSA analysis indicates that global dollar losses resulting from software piracy in 2002 amounted to some US$13 billion (up 19 per cent on the preceding year).[52] The study found all regions, except for Latin America, experienced an increase in dollar losses due to piracy compared to 2001 levels.[53]

Figure 6.3

DOLLAR LOSSES FROM PIRACY BY REGION (2002)



Source: International Planning and Research Corporation, *Eighth Annual BSA Global Software Piracy Study: Trends in Software Piracy 1994–2002*, 2003.

The BSA studies suggest that, while piracy rates have generally improved in the past eight years, their level and cost are still a cause for considerable concern.

[52] The legal and pirated software revenue was calculated by using the average price per application. This is a wholesale price estimate weighted by the amount of shipments within each software application category.

[53] The regions with the largest dollar losses are Asia/Pacific, Western Europe and North America. Despite these regions having relatively low piracy rates, they have the largest computer and software markets, and so these low rates still result in large dollar losses.

It is worth noting that while estimates for the level of counterfeiting are commonly criticised for being significantly inflated or based on suspect methodologies, a comprehensive review of methodology to measure counterfeiting for the European Commission Directorate-General Single Market found the BSA methodology to be thorough and robust (if not always transparent):

> First, there is one group of products — computer software — for which we recommend that existing methods of measuring counterfeiting and piracy activity be used by member states and other parties.
>
> We have conducted a detailed audit of existing sources of data, information and intelligence on counterfeiting and piracy to identify what measures are already available. We find that the approach taken by the Business Software Alliance is thorough and robust, although not always fully transparent. We are, though, satisfied that their estimates are credible and based on a sound approach.[54]

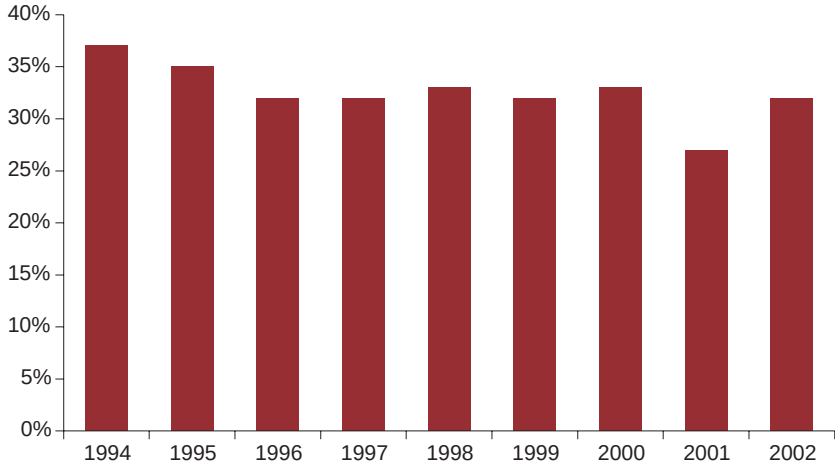
6.2 Australian estimates

While recent government inquiries and reports have provided some information on the scale of software counterfeiting,[55] the most comprehensive and recent information on the problem in Australia is provided by the BSA piracy studies.

The latest of these studies (the *Eighth Annual BSA Global Software Piracy Study*) was released in June 2003. That study found that the piracy rate in Australia for 2002 was around 32 per cent, up considerably on the previous year's 27 per cent and essentially unchanged from that prevailing in the period 1996 to 2000 (see figure 6.4).

Figure 6.4

PIRACY RATES IN AUSTRALIA (1994 TO 2002)



Source: International Planning and Research Corporation, Eighth Annual BSA Global Software Piracy Study: Trends in Software Piracy 1994–2002, 2003.

[54] Centre for Economics and Business Research, *Countering Counterfeits: Defining a Method to Collect, Analyse and Compare Data on Counterfeiting and Piracy in the Single Market* (London: European Commission Directorate-General Single Market, 2002).

[55] For example, see House of Representatives Standing Committee on Legal and Constitutional Affairs, *Cracking Down on Copycats: Enforcement of Copyright in Australia* (Canberra: Parliament of Australia, 2000).

In the Asia/Pacific region Australia's piracy rate is bettered only by New Zealand (24 per cent). While such a comparison to the Asia/Pacific region suggests that Australia's piracy software rates are low, the Chairman of the Business Software Association of Australia, Jim Macnamara, considers that it is not reasonable to compare Australia's software piracy rate with countries such as China:

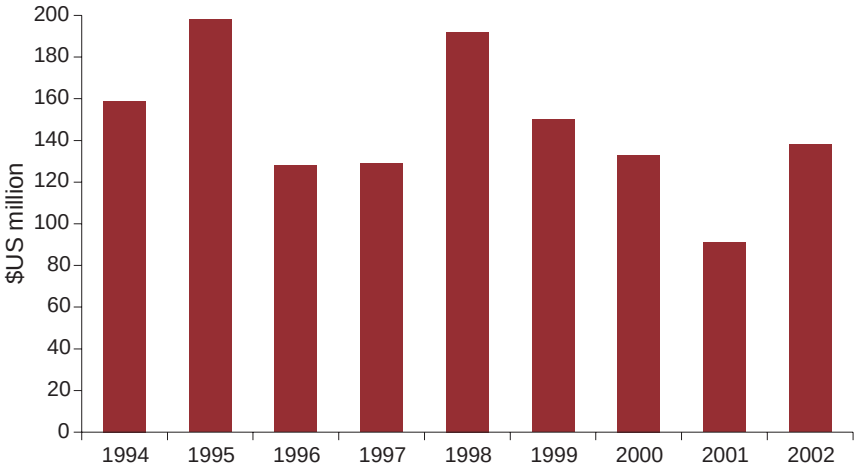
> Rather, Australia as a developed country with visions of being a leader in the Information Age and harbouring local IT development, should be comparable with the US, UK and countries like New Zealand. However, the research shows Australia lagging in copyright enforcement behind other developed countries.

In this light, by comparison, in 2002 United States piracy rates hit an all-time low of 23 per cent, currently the lowest piracy rate in the world for commercial software, and the United Kingdom rate increased one point to 26 per cent.

The scale of monetary losses to the industry arising from this level of piracy in Australia is estimated by the BSA to be in the vicinity of US$138 million for 2002. The extent of such losses over the period from 1994 to 2002 is shown in figure 6.5.

Figure 6.5

RETAIL SOFTWARE REVENUE LOST TO PIRACY IN AUSTRALIA (1994 TO 2002)



Source: International Planning and Research Corporation, *Eighth Annual BSA Global Software Piracy Study: Trends in Software Piracy 1994–2002*, 2003.

While the BSA survey provides the most comprehensive view of the scale of counterfeiting/piracy, the House of Representatives inquiry into the enforcement of copyright, which reported in November 2000 (the *Cracking down on copycats* report) also provides some insights into the issue.[56]

In a submission to that inquiry, the Attorney-Generals Department concluded that after reviewing the literature, most pirated products are mass-produced in Australia rather than imported, although it could point to no specific statistics on this. In their submission, the Attorney-Generals Department also concluded:

[56] Ibid.

> Australia's comparatively low rate of piracy is, however, not a cause for complacency. The monetary amounts involved are still high and the level of infringement may change rapidly. In recent years the estimated percentage level of infringements appears to have been generally trending downwards but, on balance, has not fluctuated greatly from year to year. With increased usage of computers and other devices using copyright protected subject matter though, overall monetary estimates of lost sales may have increased.[57]

The most recent information from the BSA study proves that conclusion to be as pertinent today as it was then.

The Allen Consulting Group has derived its own estimate of the extent and cost of counterfeiting to the Australian business software industry using:

- BSA aggregate sales data, augmented with confidential data from BSA members on sales and sales margins for elements of their business;
- the BSA piracy rate from their global survey; and
- an allowance for price elasticity effects which impact differentially for operating systems and other business applications.

Using the traditional measure of the cost of counterfeiting, the Group estimates that counterfeiting has potentially reduced gross sales in the business software industry by around $446 million.

Using a more conservative approach which adjusts that figure to account for the weighted average loss of sales margins and accounts for the likely demand elasticities for these goods, the Group estimates that the direct net revenue (i.e. profit) forgone to the Australian business software industry (producers, wholesalers and retailers) for 2002 was of the order of $155 million.

Key Findings

1. Lost sales from counterfeiting in 2002 cost the business software industry around $446 million in gross sales.
2. Adjusted for price effects and sales margins, in 2002 business software suppliers lost $142.5 million in foregone profits due to counterfeiting.
3. Adjusted for price effects and sales margins, in 2002 business software retailers lost $11.9 million in foregone profits due to counterfeiting.

[57] Attorney General's Department 1999, submission no.38 to the House of Representatives inquiry into the enforcement of copyright, 41.

Chapter 7

Computer and video games

This chapter outlines the scale and nature of counterfeiting in the computer and video games industry.

7.1 International experience

Comprehensive information on the global extent of counterfeiting in the computer and video games industry is not available. Instead, information on the scale of the problem is only available on a piecemeal basis (e.g. for various countries or economic regions such as the United States or the European Union).

The 1998 Organisation for Economic Co-operation and Development report on counterfeiting found that counterfeiting was a substantial problem for computer games. The main manufacturers of these games are based in South-East Asia and the United States, and this segment overlaps the computer industry and the traditional toy industry. That report noted that the computer industry estimated that, at the time, counterfeiting in Hong Kong's game industry alone was costing the industry US$90 million in lost revenue per year.[58]

That report also noted that Nintendo, the largest producer of video game products, claimed that China, Chinese Taipei and Hong Kong are the largest sources of counterfeit video games in the world. Trade in pirated software was said to be carried out through cartels with connections in all three countries and the United States, with the operations of these cartels costing some US$800 million in losses to the United States market for Nintendo in 1996.[59] Recent press reports indicate that while the situation has improved somewhat for Nintendo, it continues to suffer significant losses as a result of piracy.

> REDMOND, Wash.--(BUSINESS WIRE)-- Feb. 11, 2003 -- Nintendo of America Inc. today announced three new seizures of counterfeit Game Boy(R) games in the People's Republic of China, expanding its record to 135 anti-piracy raids against separate illegal manufacturers and retailers in that country alone in 2002.
>
> The January raids netted more than 300 000 pirated pieces of Game Boy(R) Advance packaging, manufacturing components and counterfeit versions of current best sellers including Pokemon(R) Ruby and Pokemon(R) Sapphire.
>
> Nintendo seized one million counterfeit products in 2002, and estimates the counterfeiting of software cost the company, together with its publishers and developers, $649 million in lost sales worldwide last year.[60]

[58] Organisation for Economic Co-operation and Development, *The Economic Impact of Counterfeiting* (Paris: OECD, 1998) 14.

[59] Ibid. 15.

[60] Video Game News, (11 February 2003 [cited 5 August 2003]); available from http://www.videogamenews.com/pr/2148206.html.

The Entertainment Software Association estimates that, worldwide, piracy cost the United States interactive entertainment software industry — which consists of both computer and video games — over US$3 billion in 2001.[61] To put this in context, total global sales for the interactive industry for that year were of the order of US$27 billion.

However, any discussion of the scale of counterfeiting needs be mindful that the output of this industry comprises both games consoles (which are generally less subject to counterfeiting because of their complexity and the economies of scale in their manufacturing; and the fact that consoles are subsidised by manufacturers) and the games (software) themselves, which are heavily subject to counterfeiting.

7.2 Australian estimates

Unlike business software, there is a paucity of historic data on the extent to which counterfeiting affects the computer and video games industry.

Information from the computer and video games industry suggested that the organised production overseas of counterfeit games and their importation into Australia and subsequent sale via normal distribution channels — while significant — is generally not the main source of counterfeit products they face.

Nor did the industry consider that large scale (national) organised domestic producers were the main source of counterfeit product.

Instead, most respondents to the Group's survey of firms in the industry who commented on this aspect considered the most significant channels to be:

- relatively small local organised concerns with limited distribution networks using, for example, public markets and internet and classified advertisements; and
- innumerable casual 'backyard' operators whose distribution network might be limited to small scale marketing or a group of friends.

For both these channels, the widespread availability of affordable CD 'burners' was considered to have clearly facilitated the growth of this source of counterfeit product.

Until recently, the growth in 'mod-chipping' of games hardware was considered a potential threat to domestic games sales as it threatened to open the door to the substantial importation of games at prices lower than those prevailing in Australia.[62] However, a decision by the Federal Court of Australia in July 2003 that found 'mod-chipping' infringes copyright suggests this channel of potential lost sales has been substantially narrowed.[63]

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[61] Entertainment Software Association, *The ESA's Anti-Piracy Program: Combating Piracy around the World and on the Internet*. (2003 [cited 10 October 2003]); available from http://www.theESA.com/piracy.html.

[62] 'Mod-chipping' is the modification of hardware in order to circumvent the technological protection measures that game producers use to segment international markets. Its use allows games sold in non-Australian markets to be played on locally sold consoles etc.

[63] *Kabushiki Kaisha Sony Computer Entertainment v Stevens* [2003] FCAFC 157 (30 July 2003).

Some idea of the scale of counterfeiting in recent years may be obtained from submissions to the House of Representatives inquiry into the enforcement of copyright.[64] In this regard, the submission of the Australian Visual Software Distributors Association to that inquiry noted that:

> Determining the amount of infringing product imported into Australia or product in Australia can only be a matter of estimation. At present it is thought that pirate copies of video games has reached 20 per cent of the legitimate trade. Parallel imports probably account for a very small part of this. The last three years has seen a considerable drop in parallel imports and a large rise in pirate copies.[65]

That same inquiry saw the Attorney-Generals' Department's submission note:

> Over the past 2-3 years [to 1999], a major new area of infringement, if the number of customs border seizures is any guide, is illegal copies of console-based computer games, principally those for the Sony Playstation platform.[66]

The effect of this counterfeiting can be considerable for individual firms. The Australian Visual Software Distributors Association submission, for example, noted that:

> The effect infringing copies have on the market can be graphically illustrated as follows. In May 1998 Sony released a video game based on car racing which is called 'Gran Tourisimo'. The game was extremely popular and it sold 190,000 units. At the time of release approximately 600,000 units of hardware had been sold on which the 'Gran Tourisimo' could be played. In April 1999 Sony released a new racing car game called 'Ridge Racer 4'. Based on the success of the previous game and the fact that hardware sales had increased to 1 million units, Sony expected sales of 100,000 units. In fact, it has only sold 40,000 units and has been told by retailers they cannot sell any more because there are so many pirate copies available.[67]

And, in a supplementary submission in response to the interim report of the inquiry, the Australian Visual Software Distributors Association further noted that 'With current tools for pirating these products so freely available (such as CD burners) the main danger will be an even greater domestic piracy rate.'[68]

A couple of years on, the extent of piracy is still a matter of considerable concern for the industry. In July 2002, for example, the Interactive Entertainment Association of Australia on the occasion of announcing its formation, stated that:

> piracy … is the single most important issue facing the interactive games industry. Piracy costs the industry $50 million per year and affects the industry on all fronts including retailing and development.[69]

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64 See House of Representatives Standing Committee on Legal and Constitutional Affairs, *Cracking Down on Copycats: Enforcement of Copyright in Australia* (Canberra: Parliament of Australia, 2000).

65 Australian Visual Software Distributors Association 1999, submission no. 32, House of Representatives inquiry into the enforcement of copyright, 3.

66 Attorney General's Department 1999, submission no.38, House of Representatives inquiry into the enforcement of copyright, 38.

67 Australian Visual Software Distributors Association 1999, submission no. 32, House of Representatives inquiry into the enforcement of copyright, 3.

68 Australian Visual Software Distributors Association 1999, submission no. 51, House of Representatives inquiry into the enforcement of copyright, 7.

69 Interactive Entertainment Association of Australia, "Australian Interactive Industry Unites under New Association," *Media Release*, July 2002.

More recent information, indicates that piracy levels in the computer and video games industry continue to significantly dampen demand for legitimate products.[70] PricewaterhouseCoopers reports that piracy is conservatively believed to be running at 10 per cent of total games revenue, or about $42 million annually.[71]

Among industry respondents who provided information on estimated counterfeiting rates, this 10 per cent level was considered a conservative estimate. Some comments even suggested that the real level of counterfeiting could be more than double that amount:

> I anticipate the loss due to piracy to be closer to around 25 per cent. This is higher than the conservative 10 per cent quoted by PwC's recent report on the Australian Entertainment and Media Outlook 2003-2007, and is based on anecdotal evidence from the past. Back in 1999 we released a game to market called Railroad Tycoon. While this game was hardly ground breaking in terms of gameplay, it certainly was for other reasons, those being it was one of the very first games to be encrypted with safe disc protection (a copy protection device). In turn, our sales were significantly more than anticipated — by some 150 per cent! We may from time to time miss a forecast on a title's potential, but not by 150 per cent.
>
> The implication seems obvious: that if novel copyright protection can result in such hugely greater sales volume than expected, this surely tells something about the potential counterfeiting that is going on out there.[72]

The results of the national household survey commissioned for this study also lend support to the likely conservative nature of the PricewaterhouseCoopers estimate. That survey found that 17 per cent of respondents admitted to having previously acquired counterfeit computer or video games and, of those who acquired games in the past 12 months:

- 1 per cent said that all their games were counterfeited;
- 2 per cent said that most of their games were counterfeited; and
- 13 per cent said that some of their games were counterfeited.

These estimates are only just below previous industry forecasts. However, it can be seen from figure 7.1 that 41 per cent would acquire a counterfeited game at a discount of 75 percent or less, and an additional 11 per cent would acquire a game if it were free. These willingness-to-purchase results suggest a greater willingness to purchase counterfeit products than would be presumed from a 10 per cent piracy rate estimate.

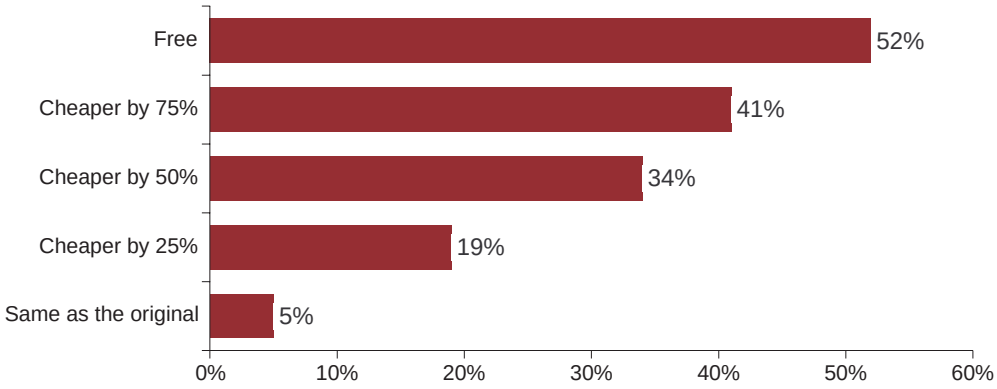
[70] PricewatehouseCoopers, *Australian Entertainment and Media Outlook: 2003–2007* (Sydney: 2003).

[71] Ibid. 128.

[72] Take 2 Interactive Software. From the Allen Consulting Group's survey in mid-2003 of firms in the interactive electronic games industry.

Figure 7.1

PERCENTAGE OF PEOPLE WHO WOULD KNOWINGLY ACQUIRE COUNTERFEITED COMPUTER AND VIDEO GAMES AT VARYING PRICE POINTS IN COMPARISON TO THE ORIGINAL'S PRICE



Source: AC Nielsen, *Piracy Survey 2003*, 2003.

In developing its own estimates of the costs associated with the counterfeiting of computer and video games, the Group has taken into account:

- confidential data from GfK Marketing Australia for computer and video games sales. This has been augmented with confidential data on sales and sales margins from members of the Interactive Entertainment Association of Australia;
- the likely incidence of counterfeiting/piracy reported for Australia in the latest PricewaterhouseCoopers' *Media Outlook*, and adjusted to account for information provided to the Group in responses to a survey of members of the Interactive Entertainment Association of Australia. The Group has also been mindful of information obtained through the national household survey commissioned for this study;[73] and
- the effects of elasticity of demand for computer and video games. Adjustments for this factor have been determined with the assistance of the results of the national household survey commissioned to determine, among other matters, likely price sensitivities for the purchase of counterfeit products.

The traditional measure of the cost of counterfeiting derived from this data indicates that it has potentially reduced gross sales in the computer and video games industry by around $100 million in 2002.

Using a more conservative measure which accounts for foregone profit margins and adjusting for the elasticity of demand effects, the Group estimates that in 2002 the direct net revenue forgone for the Australian computer and video games industry was of the order of $26 million.

[73] AC Nielsen, *Piracy Survey 2003* (Sydney: 2003).

Key Findings

1. Lost sales from counterfeiting in 2002 cost the industry around $100 million in gross sales.
2. In 2002 computer and video games suppliers lost $21.8 million in profit due to counterfeiting.
3. In 2002 computer and video games retailers lost $4.3 million in profit due to counterfeiting.

Future losses from counterfeiting in this industry are likely to grow substantially in absolute terms. The Australian market for electronic games is expanding rapidly — sales of consoles, games and peripherals in 2002 were $825 million, up 39 per cent from 2001, and this growth is expected to continue into 2003[74] — and the cost of piracy and counterfeiting is likely to grow commensurately unless the problem is successfully addressed.

[74] PricewaterhouseCoopers 2003, *Australian Entertainment and Media Outlook: 2003–2007*, Sydney, 122.

Chapter 8

Broader impacts

This chapter incorporates the Group's estimates of the cost of counterfeiting into an economy-wide model in order to identify the broader impacts of counterfeiting.

To assess the direct economy-wide impact of counterfeiting, the MMRF-Green model was employed. MMRF-Green is a multi-sector dynamic model of the Australian economy covering the six states and two territories. It models each region as an economy in its own right, with region-specific prices, region-specific consumers, region-specific industries, and so on.

In order to assess the impact of counterfeiting the model of the Australian economy was modified to reflect a 33 per cent reduction in counterfeiting over the next five years.

The model has been adjusted to reflect this scenario in two ways:

- there is an expenditure shift so that consumer expenditure is redirected from counterfeit products to legitimate products. This has a slightly negative macroeconomic impact for Australia as a whole:
  - the effects are small because the shocks that drive the deviations are expenditure neutral; for every additional extra dollar spent on legitimate software, games and toys, there is one dollar less spent elsewhere in the economy. Indeed, the small deviation from the basecase forecasts could be said to be within the error margin inherent in the model;
  - but why are the effects generally negative? The key mechanism is the terms-of-trade. Reducing counterfeiting increases the economy's dependence on imports (mainly imported software). In the long run this causes the exchange rate to devalue, allowing exports to expand. The increase in export volume is accompanied by a fall in the average foreign-currency price of exports as the Australian economy moves down the aggregate foreign demand schedule for its exports. A fall in the foreign currency price of exports, with the foreign-currency price of import unaffected by assumption, implies a reduction in the terms-of trade. A fall in the terms of trade increases the cost of capital in the long run, leading to reduced capital and to reduced real gross domestic product. It also depresses real income available for consumption and hence real consumption expenditure; and
- there is an investment shock that has a positive macroeconomic impact on Australia as a whole.[75]

[75] This is a much more plausible and rigorous approach than employed in some earlier counterfeiting studies where only the positive investment effect was considered — Centre for Economics and Business Research, *Impact of Counterfeiting on Four Key Sectors in the European Union and on the European Union Economies* (London: Global Anti-Counterfeiting Group, 2000).

Such a change will stimulate employment in the financial and business services sector (i.e. the Australian Bureau of Statistics industry classification that includes software and games) and other manufacturing (i.e. the Australian Bureau of Statistics industry classification that includes toys), peaking at 403 full- and part-time jobs in 2008.[76]

Similarly, output (i.e. production) for the financial and business services sector and other manufacturing will, in total, peak at an additional $59.5 million in 2015.

While the toy, business software, and computer and video games industries are clear beneficiaries from a one third reduction in counterfeiting, the nation as a whole will also benefit. In particular, real gross domestic product (i.e. national income) will be $41.0 million higher per year in the longer term. In net present value terms, this represents a $466.3 million benefit to the Australian economy.[77]

Similarly, it is important to note that the modelling cannot take into account a number of dynamic factors that are nevertheless important and need to be explicitly acknowledged:

- a reduction in the prevalence of counterfeits provides greater certainty for consumers as there is a producer that will stand by the legitimate product. This increases consumer confidence in both the products in question and the industry as a whole. This is likely to be particularly important for toys, where there are safety concerns associated with poorly made counterfeits; and
- greater certainty for investors. The maintenance of a strong intellectual property regime (i.e. with an emphasis on enforcement) is particularly important in attracting foreign investment. This is because Australia competes in a world with increasingly mobile capital and that the strength of a country's intellectual property laws is a key determinant in attracting foreign investment across many sectors of the economy. Indeed, the Department of Foreign Affairs and Trade has noted that 'It is generally accepted that maintenance of such a regime has served to attract state-of-the-art technology and overseas copyright works'[78] to Australia.

These factors suggest that over the longer term, the benefits from counterfeit reduction must be positive from an economy-wide macroeconomic perspective.

However, such econometric modelling does clearly demonstrate that governments also bear significant costs associated with counterfeiting. In particular, real government tax revenue will be $34.4 million higher per year over the longer term. This is comprised of an additional $29.5 million per year for the Commonwealth, and an additional $5.0 million per year shared among the states and territories. In net present value terms, this additional tax revenue represents a $487.2 million benefit to Australian governments.

[76] As a reference point, in 1998 PricewaterhouseCoopers estimated that the Australian packaged software industry employed 3158 people — PricewatehouseCoopers, *The Contribution of the Packaged Software Industry to the Australian Economy* (Sydney: Business Software Alliance, 1998) 7.

[77] All net present value calculations assume a discount factor of 4 per cent on real values (i.e. to approximate a real discount factor of 7 per cent) over a standard thirty year timeframe.

[78] Department of Foreign Affairs and Trade, *Intellectual Property Rights: A Guide to the GATT Uruguay Round* (Canberra: 1990).

Part C

Appendices

Appendix A

The MMRF-Green model

MMRF-Green is a multi-sector dynamic model of the Australian economy covering the six states and two territories. It models each region as an economy in its own right, with region-specific prices, region-specific consumers, region-specific industries, and so on. Since MMRF-Green is dynamic, it is able to produce sequences of annual solutions connected by dynamic relationships.

Some of the key assumptions underpinning the MMRF-Green model are described in the following sections.

A.1 Labour markets

At the national level, we assume that the deviation in the national real wage rate from its basecase level increases in proportion to the deviation in economy-wide employment from its basecase level. Eventually, the real wage adjustment eliminates any deviation in national employment caused by the reduction in counterfeiting. At the regional level, we assume that labour is mobile between state economies. Labour is assumed to move between regions so as to maintain inter-state wage and unemployment rate differentials at their basecase levels.

A.2 Public expenditure, taxes and government budget balances

It is assumed that the shocks associated with reduced counterfeiting make no difference to the paths of federal and state real public consumption expenditures. We also assume no deviation in the paths of tax rates applying to commodity sales and applying to labour and capital income. Government budget balances are therefore allowed to vary.

A.3 Consumption, investment, ownership of capital and measurement of welfare

In each year of the deviation scenario, aggregate real consumption in state r diverges from its basecase level by an amount reflecting the divergence in real income available to the residents of r.

A.4 Rates of return on capital

In the deviation simulation MMRF-Green allows for short-run divergences in rates of return on industry capital stocks from their levels in the basecase forecasts. Such divergences cause divergences in investment and capital stocks. The divergences in capital stocks gradually erode the divergences in rates of return.

A.5 Production technologies

MMRF-Green contains many types of technical change variables. In the simulation we assume that all technology variables have the same values as in the basecase simulation.

A.6 Employment

In the MMRF-Green model, employment is measured in terms of hours worked, not persons employed. Accordingly, percentage changes in employment, as simulated by the model, represent percentage changes in hours worked. To derive estimates of changes in the number of persons employed, we make a calculation outside of the model in which we assume that the exogenous shocks do not affect the ratio of hours employed to persons employed in each industry. Under this assumption, in each industry the percentage increase in persons employed equals the percentage increase in hours worked. It should be noted, however, that the translation from hours to persons probably overestimates the likely change in persons employed. This is because an increase in employment (persons) is likely to arise from a mix of increased hours worked per person and increased employment (persons).

Appendix B

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Features

PICK A BOX - GAMES & CONSOLES

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PlayStation 2 or **Xbox** Live? Anthony Fordham ponders the options

THE **PlayStation 2** has already lost the battle of the online gaming consoles, according to a study by industry analyst IDC. In a report, From Den to Digital Home, the researcher says **Xbox** Live's registration and player-matching system is superior to Sony's Network Entertainment and, therefore, Microsoft will develop a market lead.

IDC says a key feature of the **Xbox** Live's advantage is voice communication, using a headphone and microphone set.

Sony Computer Entertainment Australia finance and IT director Nic Foster rejects the study's conclusions, saying IDC failed to study online console gaming in a proper environment.

"We think the study is very naive, and that it takes an isolated and narrow-minded view of network entertainment," he says.

IDC analyst Brad Hill says the study is an example of thought leadership, not based on hard data.

"The study shows where IDC saw certain opportunities and certain hurdles for the providers of online-capable gaming hardware," he says.

The study was conducted at the IDC offices, with 10 analysts using **PlayStation 2** and **Xbox**, Hill says.

"We quickly realised the ease of registration in **Xbox** Live made a big difference," he says.

Xbox Live uses a centralised authentication server, so all players must register with Microsoft before they can use the service.

"This means players have a single ID for all the games they want to play, which makes it very easy to find their friends online," Hill says.

PlayStation 2 Network Entertainment uses different servers for each game and only games published by Sony use servers operated by Sony. Third-party titles use their own servers. Players must register for each game, sometimes using different IDs.

"We found it difficult to remember all the IDs we had created for different **PlayStation 2** games, and retrieving passwords for those games can be difficult," Hill says.

Both console manufacturers say their online systems reflect their business philosophies.

Microsoft home and entertainment regional director David McLean says Microsoft doesn't just supply hardware.

"Microsoft provides a full service with **Xbox** Live," he says.

"We provide hardware to get online, and once online we provide a range of player matching and messaging services to keep players in contact with one another."

Foster says Sony doesn't want to force people to play only its way.

"Sony provides great products for gaming, but it is the right of the publishers of the games to have control over how those games are played," he says. "With Microsoft, it's their way or the highway."

Foster says Sony's business model will ultimately provide more choice for players.

McLean says Microsoft's system is designed to keep players communicating, and to reduce dependence on third-party servers, which may be unreliable.

"**Xbox** is designed from the ground up to go online," he says.

"Microsoft designed **Xbox** Live to allow players to spot their friends online and to be able to communicate with them, regardless of which game they're playing at the time."

The **Xbox** Live voice communicator is supported by all **Xbox** Live games, and an instant messaging system allows players to contact friends even if they are playing different games.

Xbox Live uses a peer-to-peer system instead of the client/server system used by Sony's Network Entertainment.

Although client/server systems offer more features than peer-to-peer, they depend on local servers for fast, latency-free gaming.

Foster says Sony Australia is committed to providing local servers for first-party titles.

With peer-to-peer, the host **Xbox** becomes a temporary game server, and the speed of the games is determined by the internet connections of each player.

If Sony's Australian SOCOM 2 server crashes, PS2 players will still be able to play other Network Entertainment games or SOCOM 2 on a foreign server.

If Microsoft's central authentication server crashes, no **Xbox** Live games will be playable anywhere.

According to IDC, **Xbox** has always been presented as an online-capable console.

"**PlayStation 2** has a much bigger user base, but many of its users don't realise the console is capable of online gaming, or they are young users who don't have access to a broadband connection," Hill says.

Foster says Sony sales data shows **Xbox** Live and Network Entertainment have both sold about 6000 units.

"But Sony is selling one to one with Microsoft at this time," he says.

Microsoft is keen to emphasise that the **Xbox** is ready to go online out of the box and doesn't require extra hardware, like the PS2.

Sony's Network Entertainment kit, which includes the network adaptor hardware, is $30 cheaper than the **Xbox** Live starter kit, which includes headphones, microphone and two demo games.

Regardless of which wins the battle, IDC says one thing is certain: games speed the penetration of broadband internet and the package deals offered by Telstra and Optus in conjunction with Sony and Microsoft will encourage more people to get online and play.