

Thinking of...

Applying for a Patent in
Australia?

Ask the Smart Questions

By Matt Lohmeyer and
Philip Heuzenroeder

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Smart Questions™ Philosophy

Smart Questions is built on 4 key pillars, which set it apart from other publishers:

- 1. Smart people want Smart Questions not Dumb Answers*
- 2. Domain experts are often excluded from authorship, so we are making writing a book simple and painless*
- 3. The community has a great deal to contribute to enhance the content*
- 4. We donate a percentage of revenue to a charity voted for by the authors and community. It is great marketing, but it is also the right thing to do*



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Reviews

For any individual or small business considering filing an Australian patent application, investing the time to read *Thinking of Applying for a Patent in Australia?* is an investment that will pay dividends.”

Yasmin King, Inaugural NSW Small Business Commissioner

“*Applying for a patent in Australia* brings a new level of clarity to the question ‘to patent or not to patent?’. Many Australian Organisations are not intimately aware of the power that intangible assets can provide them in the global marketplace. This book provides a fantastic first port of call for those pondering this question, and will provide insight into the key questions that need to be considered.” *Marcus Tarrant, Managing Director, Mission HQ Pty Ltd*

“An enjoyable romp through the normally dry landscape of patenting! The book should be required reading for budding inventors.” *Andrew Baker, Partner, GBS Venture Partners*

“Most engineers and scientists would agree that the difference between success and failure in technical matters is usually the time taken to honestly answer a few smart questions. IP protection and commercialisation is no different. This book takes the masses of information available on the patent system and distils it into a simple, concrete methodology for evaluating and protecting any new idea. Matt and Philip have done a fantastic job in creating a useful tool for people of all levels of experience who want to make smart decisions about patent protection.”

Warwick Bagnall, Chief Engineer, Cavitus Pty Ltd

“This book is exactly what we need. Hopefully it will encourage many inventors to ‘unlock the bottom drawer’ and let their inventions and IP take a breath of life. The approach is engaging and intelligent and will assist many entrepreneurs and angel investors to navigate the complexities of IP.”

Christine Kaine, Founder, Business Angels Pty Ltd

“I wish I had read this book before I engaged an IP lawyer, I could have saved thousands in legal fees by being better prepared. Money which would have been better spent on marketing.”

Jonathan Weinberg, Serial Entrepreneur and Owner, HeartCall Pty Ltd

“*Thinking of Applying for a Patent in Australia?* answers all the questions you already have, and a few more you didn’t know to ask, about this daunting process. I would make this required reading for anyone that asks about what to do with their invention. Well done to Matt and Philip for finally clearing the air on this tricky issue.”

Dr David Andrews, technology commercialisation executive

“If you are looking to patent, reading *Smart Questions* will improve your chances of getting a return on your investment.”

David Mitchell, Chief Executive Officer, X-Energy Pty Ltd

“The Smart Question structure works extremely well. The authors have successfully consolidated their considerable personal experiences of IP and commercialisation to produce an exceptionally effective and useful tool for the reader.”

David Cosgrave, Lecturer, The College of Law

“There are any number of publications available providing the fine detail on every aspect of patenting and IP due diligence. As an investor in early stage technology companies, I have struggled to find an IP user’s guide that tells me what I want to know quickly and in a form that is easy to understand. Lohmeyer and Heuzenroeder’s new book will make a great reference text or can be used as a comprehensive introduction for those wanting a broad understanding of the IP landscape in Australia.”

Mark Bonnar, Investment Director, Cleantech Ventures Pty Ltd

“An easy read format and big on content. The book helps you get to the important points quickly. The structure on topics with question / response format makes for a great reference document and is a big aid when helping others within the business. ... I definitely value our IP differently and have a much clearer understanding of when to seek patent and when not too. As a mechanical engineer I have had a couple of inventions during my career that I now wish I had pursued a patent for. Your book has made me realise this.”

Paul Parry, Assistant Line Manager, Norske Skog Boyer

“An essential handbook for inventors, SME managers and anybody who wants to understand the patent world in Australia. A very enjoyable read, I highly recommend it to anyone who wants to understand the Australian IP system”

Hesham Soliman, Founder & Director, Elevate Technologies Pty Ltd

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Matt is an independent consultant, helping inventors and businesses to protect and exploit their IP. After a 17-year career in drug development and technology commercialisation in the UK and Australia, Matt now manages his own business (www.ip-resources.com) and consults for Streamwise, a consulting firm specialising in business strategy and organisational development.

As a trained negotiator and mediator, Matt assists industry and government clients with important commercial negotiations. He also teaches executive programs in advanced negotiation skills for Scotwork and is part of the adjunct faculty of the AGSM. Matt is married, has three children and a Labrador and hopes to succeed in negotiating access to the sofa and the TV remote some time soon.



Philip Heuzenroeder

Philip is a specialist intellectual property lawyer and a Principal at leading Australian IP firm Spruson & Ferguson (www.sprusons.com.au). He has nearly 20 years of legal and commercial experience, both in private practice and as in-house counsel, providing advice to clients in the energy, life sciences, ICT and other technology intensive industries. Philip works with clients ranging from individual inventors and SMEs through to major Australian universities, government departments and multi-nationals. He led the team that developed the IP Manual for Australian Government Agencies, as well as being a principal author of IP management handbooks prepared by Spruson & Ferguson with peak industry associations in the electrical, biotechnology and engineering fields. Philip is regularly asked to present workshops on issues relating to intellectual property in Australia and overseas. He is married with three children, all of whom have a sound grounding in copyright law...



Table of Contents

The Patent System	0
It's not all plain sailing.....	6
Ask the Smart Questions	10
Patently Relevant Questions	14
What can I protect and how?	17
Do I have what it takes?	37
Should I patent my idea?.....	59
What type of patent is best and how do I apply for one?....	87
Case Studies: when the rubber hits the road	113
Final Word	121

Acknowledgements

There is no shortage of detailed IP Manuals and expert books on intellectual property.¹ However, many of these books tend to be technical, highly detailed and exhaustive documents. Books full of answers – not everyone’s cup of tea. For many years, we wished that *someone* would write a handy and pragmatic, ‘user’s guide’ to patents and trade marks. A book to help inventors, scientists and entrepreneurs make better decisions about their own ideas. We envisaged a book without jargon, that doesn’t seek to explain all the nuances of the law, but instead challenges its readers to think about the many diverse legal, commercial and personal issues involved in protecting and exploiting their IP.

A chance meeting with Stephen Parker of Smart Questions Limited ignited our passion to make this happen and made us realise that that elusive *someone* might as well be us. So the first thank you goes to Stephen, without whom this book might never have been started.

We also owe a lot of thanks to all our colleagues and mentors, past and present, from whom we have learnt so much over the years. Although we may not have always appreciated it at the time, the practical experience we have gained from observing and learning from their approach to practical problems, their successes, and of course occasional mistakes have been invaluable. Of course, the benefit of their experience and helpful guidance when a few of our own ‘learning experiences’ came back to haunt us also did not go astray.

We are grateful to all who have reviewed the book and provided candid feedback, helpful suggestions and their real world insights.

Most of all, we would like to thank the mainly unsung heroes for whom this book was written: the creative geniuses, inventors, entrepreneurs and scientists, without whom this world would be duller and poorer place. The patent system was created for you, and without you there would be no need for this book.

¹ For details of some of the books and manuals we recommend for further reading, see ‘Sources of Further Information’ at the back of the book.

This is our chance to thank you for your contribution.

The final thank you goes to our families and friends, who have endured evenings, nights and weekends of physical and mental ‘absenteeism’ on our part. In particular:

Donna, Tasch, Kat and Nick

Fenella, Ollie, Audrey and Mr P

We promise not to do it again (much) after we’ve finished the Smart Questions book on trade marks next year...

Foreword

Small Business is time poor, a fact that no small business owner will deny. In a society of ever increasing information overload, smart sources of information that provide a simple guide to complex concepts are as rare as a paperless office!



Thinking of ... Applying for a Patent in Australia? is one of these rare finds. Written for inventors, entrepreneurs and small businesses, it provides a succinct self-help guide on how to make the most of innovative ideas, ensuring that they are able to be supported and protected under the Australian patent system.

Within the first few chapters of this book, the authors identify some of the key benefits of owning a patent but equally outline that obtaining a granted patent is not a cheap or easy process. For small businesses, which tend to have limited cash resources, wise decision-making is imperative, especially in the early stages of protecting any innovation.

The book's question and answer structure allows the reader to assess rapidly whether patenting is appropriate to their current needs and then guides the reader step by step through the process. It empowers inventors to become informed customers of professional intellectual property services and to use such services efficiently and effectively.

While small businesses face many challenges in terms of time and resources, they still must take the time to understand and be responsible for their longer-term competitive business interests. The responsibility to look after intellectual property should not be abdicated due to lack of knowledge.

For any individual or small business considering filing an Australian patent application, investing the time to read *Thinking of ... Applying for a Patent in Australia?* is an investment that will pay dividends.

Yasmin King, *BEc Hons, MBA, FCPA, FAICD*

Inaugural NSW Small Business Commissioner

Who should read this book?

Anyone who wants to ensure that bright new ideas can become successful.

Generally, it is the creators of great new ideas that are most motivated to make them successful. The problem is that coming up with an invention and protecting, marketing and commercializing it are very, very different skillsets. If you have an inventive streak, are never quite satisfied with the way things are and constantly looking for ways to improve the world around you, then read on. This book is written principally for you. It is not technical and we have tried to steer clear of the jargon and legal mumbo-jumbo that often surrounds Intellectual Property (we'll call it 'IP' from now on to keep it simple).

This book is intended to be a catalyst and a guide for anyone dealing with novel ideas, inventions and new technologies in the context of a commercial enterprise. It is aimed squarely at those who see IP as something that should be utilised to serve business and society as a whole. Below are just a few examples of the kind of people who will find that this book may come in handy. Which one are you?

Inventors, Entrepreneurs & Researchers

Innovation and bright ideas are what drive and excite you. The grey suits looking after the commercial and legal aspects do not. This book will give you a toolbox of Smart Questions to ask. You can use these to challenge yourself and to keep your advisors on their toes. Addressing the Smart Questions will ease the long and sometimes tedious process of engaging with the commercial and



legal realities. Most importantly, knowledge and smart preparation will save you money and stack the odds of a successful outcome in your favour.

Business Owners

If you own a business that doesn't utilise IP, you probably haven't looked carefully enough! Can some of the innovative ways in which you run your business be protected and exploited? Have you or your staff developed patentable technologies that could be useful to others? Who owns them? How do you decide whether it's worth going to the trouble of protecting it? You need answers, but you need the answers that are right for *your* business. The kinds of answers that only come from asking Smart Questions.

Directors & CEOs of Technology Companies

You are in charge of an SME with an existing and expanding IP portfolio – and the costs of maintaining that portfolio. The patent attorneys and the research team seem determined to protect everything, but does everything need protection? How do you sort the wheat from the chaff? Can you contain costs without affecting future opportunity? Learning to ask Smart Questions will help you to get to the core of what's important and pave the way to a decisive and rational outcome for the business.

Angels & Venture Investors

You've been offered an investment opportunity involving patents and other IP. How solid are the patents? Sound enough to invest? How do you get beyond the glossy pitch to pressure-test the IP that sits at the heart of the business proposition? You'll need to ask Smart Questions. Smart Questions will help you to challenge the opportunity, examine the IP value proposition and ensure that there is clear line-of-sight from each patent to a downstream return on investment. After all, the value of many technology companies is principally a function of the perceived value and strength of its IP portfolio.

Institutional Research Office & Technology Commercialisation Staff

Working with inventors can be challenging and a lot of your time can be spent explaining the operation of the patent system and the

legal and commercial requirements for successful patenting. Why not short-circuit some of that process? Instead of giving them generic answers, give them the Smart Questions and let the researchers bring their answers to you. By empowering the drivers of innovation, Smart Questions will save you time, deliver better quality disclosures and a higher level of engagement from research teams.

Business Advisors, Consultants & Lawyers

Do your clients need see a patent attorney? Is a patent the right way to protect their IP? How can you save your clients money by ensuring they are fully prepared before meeting with an attorney? Which attorney should you recommend to your client? Smart Questions will help you address these and many other challenges you'll face when dealing with IP questions from your clients. Using Smart Questions will help you to tease-out the real needs of your client and a targeted referral to the right patent attorney will help cement your status as a trusted advisor.

Patent Attorneys

As a patent attorney, you'll be right across all the technical aspects of your client's IP portfolio, but many of your clients are not. Rather than spending hours asking each of your clients the same sets of questions to prepare them for the commercial and patenting choices ahead, why not make it easy by providing them with a comprehensive set of Smart Questions in advance? It empowers your clients to make the right decisions and frees up your time. When you ask the Smart Questions, your clients will appreciate the unexpected insights that these can provide.

How to use this book

This book is intended to be a catalyst for action, as well as a guide. We hope that the ideas and examples inspire you to act. So, do whatever you need to do to make this book useful. Go to our website and email colleagues the e-book summary. Use Post-it notes, write on it, rip it apart, or read it quickly in one sitting. Whatever works for you! We hope this becomes your most dog-eared book.

I already know the IP system ... OK, skip straight to the Questions

Perhaps you already have a thorough understanding of the patent system in general, as well as some of the specifically Australian twists. You may be familiar with the implications, benefits, trade-offs and risks of the IP process. If you like, you can skip straight on to Chapter 4 where the structure of the Smart Questions is explained. Chapters 1-3 won't go away – you can always come back later.

But before you go, please consider reading 'Getting Involved' at the back of the book and see how you could become part of the Smart Questions community.



It's not all plain sailing...

My definition of an expert in any field is a person who knows enough about what's really going on to be scared.

P. J. Planger (American software pioneer & entrepreneur, 1943 –)

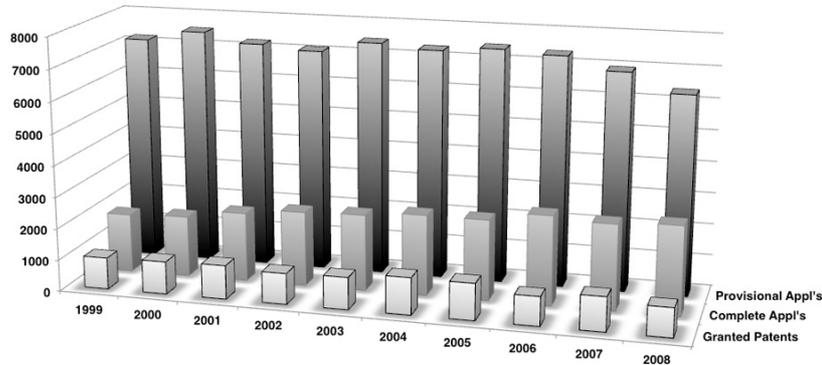
EVEN though the aim of the patent system is simple and noble, the way it works is far from straightforward. Every inventor has horror stories to tell about red tape, strange terminology, seemingly random objections and the pressure of immovable deadlines. The worst part is probably the cost of the process not just in terms of money, but also in time. All that grief and at the end there's not even an assured outcome. The statistics for Australian patent filings are sobering.

The average provisional patent application has only a 20% chance of survival

Ignoring overseas applications and innovation patents, between six and seven thousand provisional patent applications are filed in Australia every year (see graph, black bars). Of these, well over half are abandoned or re-filed within 12 months and never converted into complete applications. Whilst this separates out some of the chaff, the attrition rate increases even further as the patent process becomes more expensive and more rigorous. Of all the complete applications filed (gray bars), only about 35% make it through to ultimately become granted Australian patents (white bars). The whole process takes between 2 to 6 years and the attrition rate from start to finish is in the order of 85%. In short, your average

provisional application has less than a 1 in 5 chance of making it all the way through the process.³ Those are scary odds!

Australian Patent Office Statistics 1999-2008³



The secret to success is obvious: you need more than an *average* patent application – you need a *quality* application and a *sound strategy* to ensure you have an even chance of ending up with a granted patent. A few Smart Questions at the beginning can save you a whole lot of grief and expense later on.

What about commercial success?

Whilst securing a granted patent represents a significant win, it does not guarantee that the invention will go on to become a commercial success.⁴ There are no statistics on how many granted patents ever repay their owner's patenting investment, never mind delivering a handsome profit. Our suspicion is that fewer than 25% of granted patents are genuinely profitable.

³ The graph and statistics quoted are for patents filed and granted in Australia, where at least the first named inventor is resident in Australia. We have excluded innovation patents and patents filed in Australia by overseas inventors and corporations. The data were sourced from WIPO (World Intellectual Property Indicators, 2010) and IP Australia (Fact Sheet 4565 IPA update v3; IP Scorecard 2002-2006).

⁴ See case study 4. for an example of some of the commercial challenges.

It's not all plain sailing...

The only reliable data we could find in this area are from the annual survey of commercialisation activity in Australia's universities and public research organisations⁵. In 2007, the 77 organisations surveyed reported holding 11,237 pending and issued patents worldwide as well as 751 commercial agreements that made *some* money. Let's assume generously that each agreement covers a suite of five patent cases and actually makes a handsome profit, rather than just generating *some* money. That still leaves over 7,000 patent cases out there that are not even close to earning their keep. These are the statistics for a sector where inventors have access to dedicated commercialisation staff and expert patent and legal advice funded by their organisations. What about the thousands of independent inventors and SMEs looking to protect their new ideas with a view to striking it rich in the future? What are their odds of success?

*Certainty of death, *small* chance of success... What are we waiting for?*

Gimli in The Lord of the Rings: Return of the King (2003)

Clearly, the odds of securing a patent and striking it rich appear slim, yet the applications keep coming. Why? One likely reason the dropout rate is so high is because many inventors are chasing their dream without ever asking themselves some tough questions about the nature and true value of their invention up-front. People can get carried away with the excitement of their idea and rush into a patent filing without a clear picture of what they have and where they are headed. As a result, they get tangled up in the process, lose the plot, lose a lot of money and then end up as part of the statistics.

On the other hand, the right idea at the right time can have a huge impact and when that happens, protecting your innovations and inventions will return you a handsome profit.

If you are thinking of applying for a patent in Australia, you need to ask yourself a range of Smart Questions at every step of the process. Why? Because you'll need a lot of smart answers before committing your time and hard-earned cash to the process. What can you really protect? When is the right time to file? What kind

⁵ National Survey of Research Commercialisation 2005–07 (July 09) Dept. of Innovation, Industry, Science & Research; Canberra.

It's not all plain sailing...

of patent should you apply for? Who else can lay claim to your invention? The list goes on... Be prepared for every stage of the process. With smart answers and some good professional advice, you can shorten the odds of succeeding dramatically.

That is why we have written this book. It's to help you succeed.



Chapter

3

Ask the Smart Questions

If I have seen further it is by standing on the shoulders of giants.

Isaac Newton (English mathematician, alchemist, astronomer & physicist, 1643 – 1727)

SMART Questions are all about giving you valuable insights or “the Smarts”. Normally these are only gained through years of painful and costly experience. Whether you already have a general understanding of the subject and need to take it to the next level or are starting from scratch, you need to make sure you ask the Smart Questions. We aim to short-circuit that learning process, by providing some of the expertise of the ‘giants’ to whom Isaac Newton referred.

Not all of the Smart Questions will necessarily be new or staggeringly insightful. The value you get from the information will clearly vary. It depends on your background, role and previous experience. Smart Questions will typically do one of the 3Rs.

The 3Rs

Some of the questions will be in areas where you know all the answers so they will be **Reinforced** in your mind.

You may have forgotten some aspects on the subject, so the book will **Remind** you of these.

Other questions may **Reveal** new insights to you that you’ve never considered before.

How do you use Smart Questions?

The structure of the questions is set out in Chapter 4 and the questions are in Chapters 5 to 8. The questions are laid out in a series of structured and ordered tables with the questions in one column and the explanation of why it matters alongside. We've also provided a checkbox so that you can mark which questions are relevant to your particular situation.



A quick scan down the first column in the list of questions should give you a general feel of where you are for each question versus the 3Rs.

At the highest level they are a sanity check or checklist of areas to consider. You can take them with you to meetings or use them as the basis of your IP plan. Just one question may save you a whole heap of cash or heartache down the track.

In Chapter 9 we've brought some of the questions to life by illustrating a few of the common pitfalls with real-life examples.

We trust that you will discover a few real insights. There may be some ‘aha’ moments. Hopefully there won’t be too many sickening, ‘I wish we’d done that differently’ moments. Even if you do find yourself in such a situation, the questions may help you to re-establish some order, take control and steer the project back into calmer waters.

Probably the most critical role of the Smart Questions is to reveal risks that you might not have considered. On the flip side, they should also open up your thinking to opportunities that hadn’t yet occurred to you. Balancing the opportunities and the risks, and then agreeing what is realistically achievable is the key to formulating an effective IP strategy.

The questions could be used in your internal operational meetings to inform or at least prompt the debate. Alternatively they could shape the discussion you have with your co-inventors, commercial advisors, patent attorneys, investors, company management, research funders or the many other stakeholders involved in creating, protecting, prosecuting, managing and exploiting patents and IP.

In fact, it is our hope that many of the professional advisers in this space will hand this book to their clients as a first step to building more informed and more productive partnerships.

How to dig deeper

Need more information? Not convinced by the examples, or want ones that are more relevant to your specific situation? The Smart Questions website features a micro-site specifically for this book. This features a list of other supporting material and links to other websites or blogs. This is a fast-moving area.

Of course, there is also a growing community of people who’ve read the book and who are all at different levels of expertise. We encourage you to engage with us and with each other via the Smart Questions forum pages.

And finally...

Please remember that these questions are NOT intended to be a prescriptive list that must be followed slavishly from beginning to end. It is also inevitable that the list of questions is not exhaustive

and that the law will change. However, we are confident that with the help of the community the list of Smart Questions will grow and continue to be refined.

If you want to rephrase a question to improve its context or have identified a question we've missed, then let us know so we can add to the collective knowledge in the next edition.

We also understand that not all of the questions will apply for all readers and to all businesses. However we do encourage you to read them all. There may well be a nugget of truth that can be adapted to your circumstances.

Above all, we hope this book provides a guide and pointers in areas that are of value to you, and that you experience many of the '3Rs' in the process.

Chapter

4

Patently Relevant Questions

Remember, nothing that's good works by itself, just to please you. You have to make the damn thing work.

Thomas A. Edison (American inventor & businessman, 1847 - 1931)

THERE are over 110 Smart Questions in this book, but broadly speaking, they could all be summarised by five top-level questions. Everyone who is even beginning to think about a patent application should be able to address each of these five critical areas confidently. You need to ask yourself:

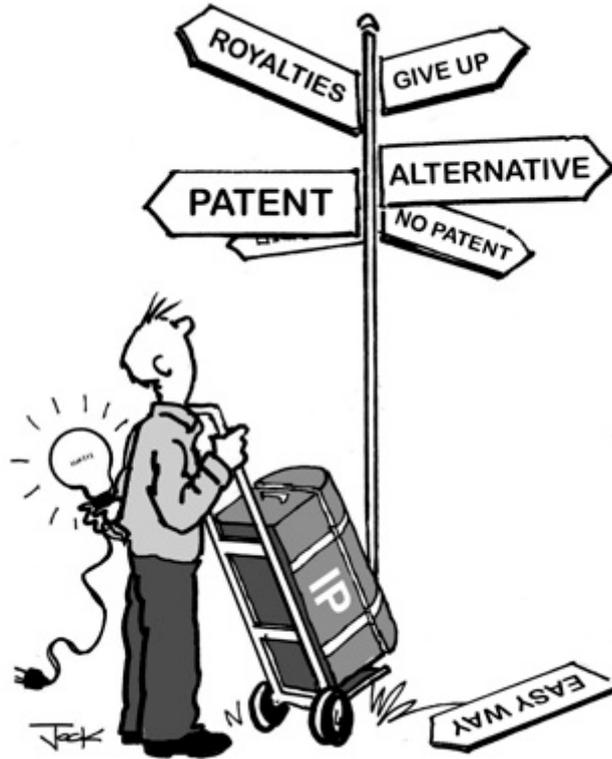
1. **What can I patent (and what are the alternatives)?**
2. I know what I have, but... **Do I have what it takes?**
3. Good news, but... **Should I patent my idea?**
4. Now choose... **What type of patent do I need?**
5. Everything is lined up, so... **How do I apply for one?**

Each of these five top-level Smart Questions is addressed in the following chapters. In each chapter you'll find more detailed sets of Smart Questions, which explore that topic. These are designed to help you arrive at smart answers tailored to your specific circumstances. Each section and sub-section deals with a specific topic, so feel free to dip into specific areas of interest or work through the questions top to bottom – whatever works for you.

Let us add one disclaimer though: the Smart Questions and associated explanations are intended as a guide to you, but should not be regarded as authoritative statements on the relevant law and procedure. They are not legal or patent advice. Whilst we have tried to ensure the information presented is accurate and up to date, we

recommend that you discuss your specific circumstances with your patent attorney or other IP or legal adviser. You can also find more information and up-to-date web links at the Smart Questions micro-site for this book at www.smart-questions.com.

We also *strongly* recommend that you seek professional assistance before applying for a patent. Patent drafting in particular is a very technical skill. This is not a game for amateurs or the faint-hearted.



To help you locate the Smart Questions of interest to you right now, here is a list of the chapters and sub-sections of the book. It's time to dive in and challenge yourself with a few Smart Questions about your favourite idea or invention.

Chapter 5: What can I protect and how?

1. **Section A** – What's the big idea and how can I protect it?
2. **Section B** – Why go for a patent and what are my options?

Chapter 6: Do I have what it takes?

1. **Section A** – Is my idea patentable and do I have the right to apply?
2. **Section B** – What might prevent me from getting a patent?

Chapter 7: Should I patent my idea?

1. **Section A** – How strong will my patent be?
2. **Section B** – Does it stack-up commercially?
3. **Section C** – Timing is everything...?

Chapter 8: What type of patent is best and how do I apply for one?

1. **Section A** – What type of application is best?
2. **Section B** – How do I apply?
3. **Section C** – Finding the right patent attorney...

Chapter

7

Should I patent my idea?

If a man write a better book, preach a better sermon, or make a better mouse-trap than his neighbour, tho' he build his house in the woods, the world will make a beaten path to his door.

Ralph Waldo Emerson (American poet & author, 1803 – 1882)

WHILST Emerson's sentiment may still hold today, it's important to note that he was a poet and philosopher, not an inventor. In today's information economy, awash with new ideas and better mousetraps, just having a good idea is not sufficient. You need a hard-edged plan to market and commercialise your invention and solid IP protection *must* be part of that plan. There are good reasons to file patent applications, but there are also many good reasons not to (just yet). At the end of the day, patents are much like a fence to control access to a piece of 'intellectual real estate'. Whether it's worth building a patent fence will depend on many factors, the top six being:

- is the property attractive enough commercially to be worth fencing? (anyone keen on fencing the tidal swamp...)
- do you have the funds and stamina to fence all of the property properly? (a sturdy gate is of limited use without a decent fence around the rest of the property!)
- how strong a fence can you build (all fences have holes, how big are the holes in yours?)
- can you build multiple fence lines on the same property?
- can you patrol the fence against intruders?
- are you willing and able to throw out any fence jumpers?

Should I patent my idea?

Of course, this pre-supposes that you want to build a fence at all. Perhaps you are happy for everyone to graze their sheep on the paddock of your ideas. The modern term for this is ‘Open Innovation’. That’s perfectly fine, of course, but the risk you take in not looking after your property is that you may wake up one morning and find that your back yard has been turned into an open-cut mine and someone else is exploiting your ideas without even a thank you.

Some great inventions like the black box flight recorder, insect repellent and the powerboard (see Case Study 1.) have taken the Open Innovation route to market. Their inventors did not make a fortune from the fruits of their labours – others did. Open Innovation works well where lots of different ideas are required to develop a product, where making money is not that important to the inventors/contributors, or where the invention is relatively simple and cost-effective to make (e.g. software).

If your invention will take a long time to perfect and is costly to make, then even giving your invention away for free to everyone is no guarantee that it will be developed – quite the contrary. If someone else has to invest substantial funds to bring the product to the market, then they will want to be able to protect that investment against copycats. The classic example relates to pharmaceuticals. Industry estimates suggest that it takes around 1.3 billion dollars to bring a new drug to market these days.⁶ Even if you presented industry with the recipe for a wonder drug, no one player would invest that kind of money to bring your drug to market unless it had solid IP protection. This is because, once approved, others could instantly copy the final product and make for a few cents a tablet what has taken you millions of dollars to develop.

So, quite paradoxically, if you want a complex invention to be widely available in the commercial market place, you must be able to offer a level of certainty that any investments in development and marketing can be protected against freeloaders. The best way to do that in most markets is through enforceable IP rights, particularly patents.

⁶ http://pharmalicensing.com/public/articles/view/1153412098_44bfac02291f1



Of course, there are some industries where technology moves so quickly and market dynamics are such that the patenting process seems to move at a glacial pace by comparison. New media, information technology and telecommunications, for example, represent such fast-paced sectors. Other forms of IP protection may be more effective in those areas.

The only way to make good decisions is to make informed decisions. Plan what you are going to protect, how you are going to protect it, how you will commercialise your invention and how you will ensure that your turf is defended against infringers and copycats. Some of the following questions may help you decide which way to go.

We have grouped the questions into three sections:

1. **Section A** – How strong will my patent be?
2. **Section B** – Does it stack-up commercially?
3. **Section C** – Timing is everything...

7.1 How strong will my patent be?

Assuming your invention has passed the basic patentability criteria (Chapter 6.) the next question is whether to go ahead with patenting or not. As a commercial tool, you'd ideally want your patent to be rock solid, impossible to get around, protecting a critical patch of 'real estate' and backed-up by lots of other forms of IP protection. Patents like that are pretty rare.

We've already mentioned in Section 5.1 that different types of inventions allow for inherently stronger patent protection than others. Unfortunately, you can't really control the nature of your invention – it is what it is. However, there are many other aspects that also contribute to the effectiveness of patents as a commercial tool. In this section, we'll invite you to explore the effectiveness of your idea in patenting terms, and what you might be able to do to strengthen your case. Perhaps it's worth delaying the filing of your patent application until some of that strengthening work can be completed? As always, when it comes to patent strategy, it's worth consulting someone who has professional experience to help guide your decisions in this arena.

To prepare you for that conversation, here are a few smart questions.

<input checked="" type="checkbox"/>	Question	Why this matters
<input type="checkbox"/>	7.1.1 Can the invention be easily and effectively protected as a trade secret?	<p>If you can protect your invention long-term through keeping it secret, you may be better off not disclosing the secret to the world in a patent and you can save yourself a small fortune and trouble in the process. New manufacturing methods or recipes are more suited to this approach than gadgets or machinery. Think: as long as the Coca-Cola recipe remains a secret, no one can claim that they manufacture exactly the same drink. That said, secrets can be hard to keep long-term and others might stumble on your secret independently and might even seek to patent it themselves! It's a risk, but it may be worth taking.</p>
	7.1.2 How well defined and worked-out is the invention?	<p>How small is the mesh of your fence? If your invention is very specific and can be described unambiguously, that will make for some strong patent claims. For example, a new type of ergonomic jam jar lid with 7-corners to allow easy opening by hand can be described very specifically, making for good solid patent claim. A claim to a plant extract with therapeutic properties would be less effective, unless the specific active ingredients, their combinations and the concentration ranges over which the ingredients are active could also be clearly defined. A patent attorney will advise you if more work would be advantageous to protect your invention more effectively.</p>

X	Question	Why this matters
	7.1.3 How broadly applicable is the invention?	Have you fenced all of the acreage where your invention might be useful? Where else might a new jam jar lid design be useful? On industrial drums? At the end of hand-tightened pipefittings? To operate large valves, taps and other machinery? Can you show other credible uses of your invention to make broader claims? A good patent attorney will advise you how best to claim your invention more broadly and what development work might be useful to support those broader claims.
	7.1.4 How difficult is it to create something that gets around the patent claims?	Every good idea will be copied or at least re-created – it’s the highest form of flattery. One important way to reduce the damage this can do commercially is to make sure you end up with solid well-worded claims in your patent application. Our advice is to resist offers for ‘cheap’ provisional filings, often prepared by a trainee or paralegal and not the primary patent attorney. Invest to get the best patent attorney you can afford onto the case from the start. When you get the first draft of your application back from your attorney, read the claims carefully and think about how you would try to get around the language used. If you can think around it, your competitors will! For a classic example, see the Case Study 5.

<input checked="" type="checkbox"/>	Question	Why this matters
	7.1.5 How similar is the invention to other ideas already out there?	Is your invention an improvement on something else? Has your invention been invented before? What (and who) else is out there? It's a good idea to do a patent search for similar kinds of technologies. You can do this yourself (see useful links at the end of the book), but we'd advise you to get a professional to sift the wheat from the chaff for you. With over 120,000 new patent applications being filed internationally every year, you'll be sure to find something in your field that's of interest. And what if, worst case, you find that someone else has already patented your brainchild a few years ago? Well, at least you can rest comfortably in the knowledge that you won't be spending tens of thousands of dollars chasing a dream.
<input type="checkbox"/>	7.1.6 Is the invention dominated by, or does it infringe, other patents already out there?	Whoever markets and sells your invention needs to be clear about other patent rights out there and whether they may impact on their plans (<i>Patent Speak: to have "Freedom to Operate"</i>). That's another good reason to search for related patents early. You may find other patented technologies that already cover aspects of your invention. If that happens, you have a number of options including changing your design to stay clear of those areas, taking a licence to the other IP, or finding someone who already has a licence to the other IP to commercialise your patent. Of course, if your patent is hopelessly dominated by third-party IP, it may not be worth pursuing at all, but that's a call best made after consultation with an expert in the field and after careful study of the IP landscape around your idea.

X	Question	Why this matters
	<p>7.1.7 Does the invention require access to other patented IP to work properly?</p>	<p>Sometimes your patent may be hamstrung commercially even if you have complete Freedom to Operate. Imagine a revolutionary type of motor for use in high-speed centrifuges. In order to manufacture state-of-the art centrifuges yourself, you will need to access to lots of other IP rights covering many aspects of modern centrifuge design. None of these affect your patent claims directly, but are still very relevant to any centrifuge you may want to build using your motor. In such an event, you could consider licensing your IP to an existing manufacturer, or you could look to in-license some of the other IP you need to sell the complete machine. The former route may mean that you miss out on the larger profits that come from sales of the complete product to the end user, but you benefit from the distribution network of the larger player. The latter will allow you to sell your own centrifuges, but you'll probably need to pay royalties to the other IP holders, increasing your costs.</p>

<input checked="" type="checkbox"/>	Question	Why this matters
<input type="checkbox"/>	7.1.8 Is it reasonably possible to detect IP theft where it occurs?	The commercial value of a granted patent derives directly from the fact that you can sue people who infringe your IP rights. If the use of your IP rights is not easily apparent by looking at a competitor's product, how will you know when to enforce your rights? Imagine a patent covering a more efficient method of food processing involving a strict sequence of heating and cooling steps. It may be worth millions to the food industry, but how will you know that your IP is being infringed? Can you prove they followed your process and not a slightly different one behind their closed factory door? How valuable is this patent commercially if you can't enforce it? Among the strongest and most valuable patents are those where infringement detection is easy because use of the IP rights is apparent from the product itself.

What else would you like to know about on this topic? Here's some room for questions. Please also share them with us!

Chapter

10

Final Word

At the present rate of progress, it is almost impossible to imagine any technical feat that cannot be achieved, if it can be achieved at all, within the next five hundred years.

Arthur C. Clarke (British sci-fi author & futurist, 1917 – 2008)

THIS confident statement from Arthur Clarke is almost the exact opposite of the much-quoted statement that “*Everything that can be invented has been invented*”, which is generally attributed to Charles H. Duell, Commissioner at the U.S. patent office in 1899. Mr. Duell’s quote is almost certainly an urban myth, but the difference in sentiment is dramatic. In a space of a century or so, the horizons of mankind have broadened beyond the wildest imagination of the Victorian era. There were, of course, many factors that contributed to this, including two world wars and the cold war arms race. However, tremendous progress was also made in fields unrelated to global power struggles. Consumer products, therapeutics, manufacturing, engineering, energy technologies, IT, telecommunications, entertainment... the list is endless. Across the board, the patent system has underpinned the drive for technical, medical and commercial progress. Whilst not perfect, the patent system gives inventors the ability to profit from their ingenuity whilst, at the same time, sharing their inventions with the world. It is still the best system yet devised to facilitate ‘Open Innovation’.

This book is about your participation in this tremendous information and ideas revolution. If you have a contribution to make, the world will be the better for it if you share your ideas. We

hope this book will help you to decide whether patenting is the best way to go about protecting your interests and contributing to the store of knowledge and invention of mankind.

We know that patenting can be a daunting process and that the success rate is not high. However, you are now armed with some of the key questions, you know where to find good counsel, and we have introduced you to some of the flexibility that Australia's innovation system provides. With that knowledge, your odds of emerging at the end of the process with a commercially successful patent should be greatly improved.

We hope that your invention will one day become as celebrated as some of the other great Australian inventions like the bionic ear, the CPAP mask for sleep apnoea, wave piercing catamarans, polymer bank notes, the flu drug Relenza, the Gardasil cervical cancer vaccine, 802.11 Wi-Fi, Google Maps, or spray-on-skin for burns victims. Some of these have been developed in laboratories and research institutes, others were created in a garage. The most important ingredients are the creative spark and plenty of perseverance.

All the very best in your endeavours!

Matt & Philip



Sources of Further Information

To contact the authors, leave feedback, read about additional 'Smart Questions' that will be included in the next edition, and to access our up-to-date online links pages, please visit the micro-site for this book on the Smart Questions website at www.smart-questions.com.

Patent Office and Information Sites

IP Australia – the Australian patent office: www.ipaustralia.gov.au

World International Property Organisation – www.wipo.int

USPTO – the US patent & trade mark office – www.uspto.gov

Espacenet – the website of the European patent office – www.epo.org

Patents Online – www.patentsonline.com.au

Wikipedia – www.wikipedia.org/wiki/Patent

Industry Manuals on IP Management

Intellectual Property Manual for the Engineering Team (2009) Engineers Australia and Spruson & Ferguson

Biotechnology Intellectual Property Management Manual (2008)
AusBiotech Ltd, the Victorian Government and Spruson & Ferguson

Intellectual Property Management: A Practical Guide for the Electrical and Electronics Related Industries (2007) AusIndustry, AEEMA and Spruson & Ferguson

All are available for download at www.sprusons.com.au/ipresources.html

Patent Searching

IP Australia – Australian Patent and Patent Application Search:
<http://pericles.ipaustralia.gov.au/ols/auspat/#>

World International Property Organisation PCT Patent Search:
<http://www.wipo.int/pctdb/en/search-simp.jsp>

USPTO – US Patent and Patent Application Search:
<http://www.uspto.gov/patents/process/search/index.jsp>

European Patent Search:
http://gb.espacenet.com/search97cgi/s97_cgi.exe?Action=FormGen&Template=gb/en/quick.bts

Relevant Organisations

The Institute of Patent and Trade Mark Attorneys of Australia –
www.ipata.com.au

Australian Institute for Commercialisation (AIC) – www.ausicom.com

Commercialisation Australia: – www.commercialisationaustralia.gov.au

Intellectual Property Society of Australia & New Zealand
(IPSANZ) – www.ipsanz.com.au

Inventors Association of Australia: – www.inventors.asn.au

Knowledge Commercialisation Australasia (KCA): – www.kca.asn.au

Licensing Executives Society of Australia & New Zealand
(LESANZ) – www.lesanz.com/

NSW Innovation Advisory Service: – www.ausinvent.com

Media and Business Information

Australian Anthill Magazine – www.australianantbill.com

Australian Design Unit – business and IP toolkit –
www.australiandesignunit.com/index.php/design/tool-kit/

NSW Small Business Toolkit – <http://toolkit.smallbiz.nsw.gov.au/>

Collections of Fun Patents

www.delphion.com/gallery

www.patentlyabsurd.org.uk

www.patentoftheweek.com