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The IP driven start-up

By Robert Lind

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Chapter 1: What is an IP driven start-up?

Few start-ups are established without the founders having an eye on a future exit, even if they hope to change the world along the way or as a final outcome of their efforts. And equally few founders do not wish to maximise the financial rewards from such an exit for themselves and for their partners. For the tech start-up there is little doubt that the chances of a successful exit and the rewards from that exit are hugely dependent on the Intellectual Property generated along the way and the extent to which that IP is captured and protected.

Some start-ups may arrive at a point of exit with the good fortune to have captured and protected their key IP assets by way of happy accident. Or, they may have been in the fortunate position of having inherited foundational and hugely valuable IP from a predecessor: that might be true in the case of a spin-out from a university. These companies are rare beasts. For many start-ups, critical IP assets will have slipped through the net as they approach an exit point, meaning that the company's value will be dictated primarily by unsecured know-how, trade secrets, people and relevant contracts, assuming even those safeguards have been taken advantage of. In all cases, at the very least, value will have been lost on the journey from foundation to exit.

An IP driven start-up does not rely on good fortune to capture and secure or inherit its IP, not that it would turn that down of course. Rather, from day 1 or even before, it is driven by the need to generate IP that is relevant to the products and services that it is developing, to capture that IP in the sense that it is identified as being novel in the relevant commercial space and of commercial value, and to protect it insofar as that is possible. The IP driven start-up sees this approach as being critical to the company's success, right up there with the recruitment and retention of key employees and the development and bringing to market of successful products and services.

Research and development work is carried out with the express intention that patentable inventions will be created. How can this not be the case when so much investment is made in highly skilled engineers and scientists, not to mention equipment and materials?

Even if that is doubted, surely, if the product or service being developed is expected to be successful, it will have features that very significantly distinguish it over the competition. Given this certain knowledge, the IP driven start-up needs to have in place processes to make sure that the IP assets generated are captured and appropriate actions taken.

There is a recognition that capturing and securing generated IP is not cheap and can be an unpredictable process. Consequently, whist making prudent decisions regarding the how, what and when, significant sums are directed towards IP and this investment is deemed to be as critical as product development and testing, marketing etc. Investing in IP is not seen as a gamble, but rather is viewed as being a perfectly proper way to safeguard all of the other investments that the company makes.

There is a recognition that value is added to an IP portfolio by careful management and presentation. Being able to demonstrate a systematic approach to IP, with written procedures and allocated responsibilities, is critical, as is the retention of properly signed and collated documentation. The company will allocate resources to deal with these issues and build internal IP knowledge. Crucially, it does not see internal IP roles as a distraction from other important tasks.

The successful conclusion of this approach is that the start-up arrives at an exit point with an IP portfolio that is critically relevant to the products and services that have been developed and which will form the basis for future commercial success. More than that, the portfolio secures a technology space surrounding those products and services that will prevent or significantly inhibit competition. This is the fundamental reason why we secure our IP after all: to establish a technology monopoly which drives up future profits, increasing the company's value and making it more attractive for investment or sale.

If these are the traits of an IP driven start-up, what factors cause a start-up to adopt them? That probably comes down to the experience of the founders, mentors and investors.

A serial entrepreneur who has been through the process before has probably learned from his or her mistakes and wants to get it right from the outset. Mentors and investors are also likely to have an impact, particularly the latter who will see securing IP assets as a way to secure their investment. Of course it is not uncommon for a start-up to move its focus more towards IP as it progresses, due to the experience gained and the influence of partners as they join. But investing time and energy into understanding IP at the outset will certainly pay dividends in the long term.

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2: Why are IP driven start-ups so successful?

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If we deem investment or a successful sale as being indicative of success, it is clear that start-ups which, from an early stage, have had a clear IP strategy and that have pursued that strategy to secure a strong and relevant IP portfolio, will have a greater likelihood of success than those start-ups that lacked focus or engagement in this area. This is clearly elaborated in the article, "IP in early-stage commercial and investment success", Joseph Hadzima, Bruce Bockmann, and Alexander Butler, Intellectual Asset Management (IAM) March/April 2010; "winners are many times more likely to hold intellectual property than losers". Whilst the winners identified by Hadzima are the venture capital "industry", if they win the founders are also likely to win. Other work suggests that a doubling in the patent application portfolio of a new venture is associated with a 28% increase in that venture's valuation by investors ("Patents as Quality Signals for Entrepreneurial Ventures", Davis Hsu, Rosemarie Ziedonis, 2006).

So why is this the case? The easy answer is to say that IP assets, and in particular registered IP assets such as patents and trade marks, have a tangible value that is added to the sum of the value of the company's other assets. Assuming that a driven but prudent approach was taken to seeking protection, the value can and should be many multiples of the investment made to secure the IP assets.

But what about beyond the direct contribution of secured IP assets to a company's value? What other reasons might there be behind the success of start-ups that are driven by IP? Well, a start-up that is focussed on the creation of IP assets is much more likely to innovate. Whilst there seems little benefit in innovating merely to create something that can be patented, it is surely healthy for a company to strive for innovations that clear the bar for patentability. Having a clear strategy to generate IP assets is a key component in creating an innovative culture. Innovative, rather than merely novel, products and services that address real problems, or which open up new markets, have a much greater chance of success. This is commonly reflected in governments' policies such as the tax benefit provided by Patent Box in the UK.

Such schemes reflect the view that products and services that have patent protection are likely to be more innovative, more commercially successful, and therefore more beneficial to the country in terms of employment, tax revenue etc.

Start-ups focussed on securing their own IP assets are likely to have a greater awareness of the competitive environment than those that are not. This awareness not only allows them to assess risk, but also allows them to identify the direction of travel of competitors and steer their own products and services towards a market that offers less competition and therefore higher profits. A greater knowledge of the competitors' solutions helps to identify deficiencies with those solutions and to improve on them – a virtuous circle of generating IP – having sight of competitor's solutions – identifying deficiencies – generating more IP.

The article by Hadzima further points to a strong IP position as building investor and partner confidence by signalling sound management. Clearly, companies that have adopted a laissez-faire attitude to their IP will not inspire much confidence. The same might be said of course for a company that has expended a great deal of time and effort on securing its IP with little to show for it. But then such a company should really not be called an IP driven start-up as their approach certainly didn't involve prudent decisions regarding the how, what and when of protecting their IP and almost certainly didn't involve building internal knowledge within the company. This view is reinforced by Mark A. Lemley, the William H. Neukom Professor of Law Stanford Law School, who has stated that "Venture capitalists use client patents (or more likely, patent applications) as evidence that the company is well managed, is at a certain stage in development, and has defined and carved out a market niche" ("Reconceiving Patents in the Age of Venture Capital". Journal of Small and Emerging Business Law, 4: 137-148. M. A. Lemley).

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3: The IP toolkit

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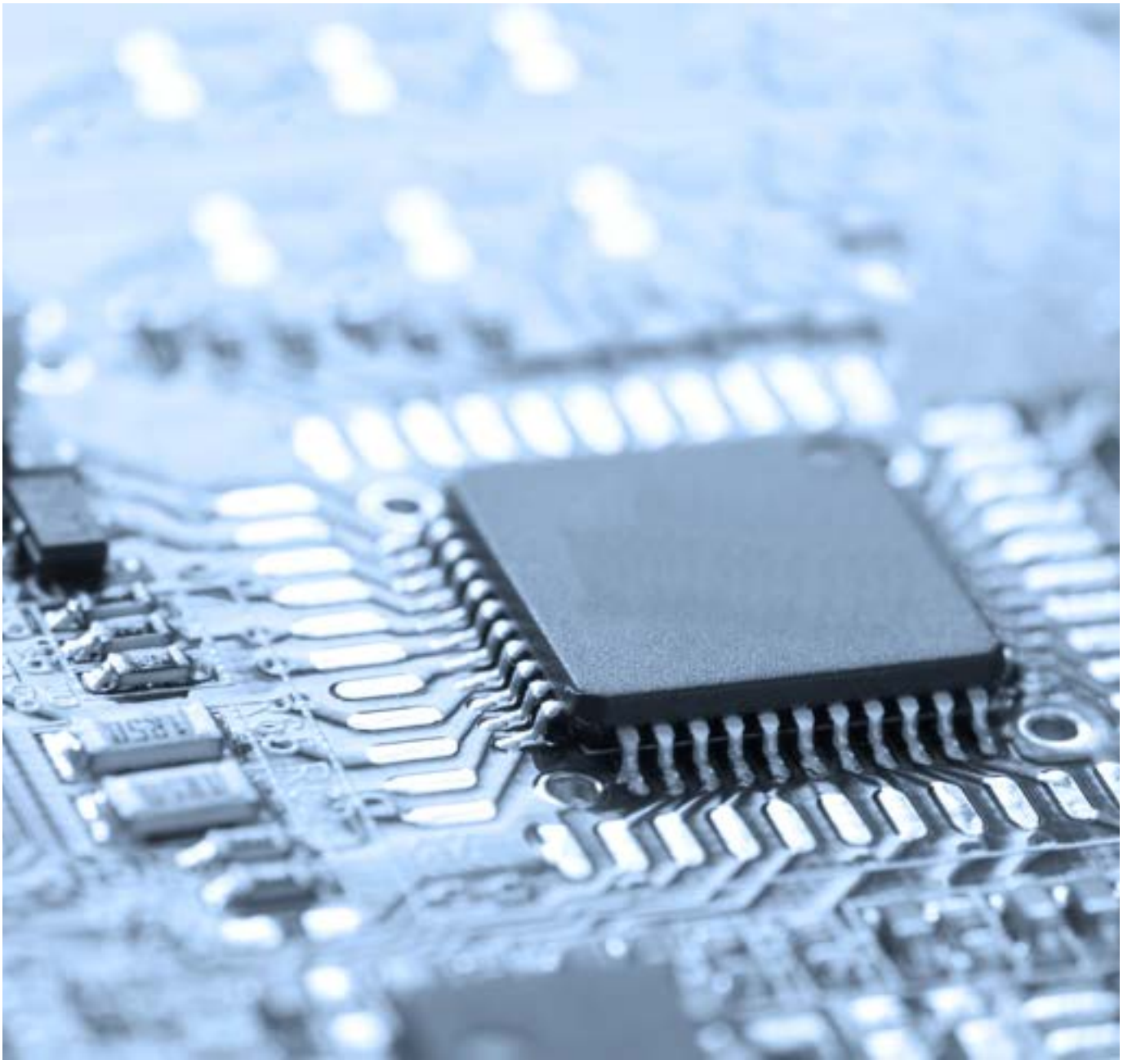

Before going much further, it is worth reminding ourselves of the IP tools in the toolkit. By that we mean the types of Intellectual Property, both registered and unregistered, that are available. A brief summary is all that we require here as endless resources are available online.

Unregistered Rights

Whilst they are very much country dependent, unregistered rights are often available. Unregistered rights are IP protections that exist automatically on creation of some IP asset; there is no need to register them. In other words, something for nothing, apart from that is your investment to create the asset.

Unregistered rights include know how, trade secrets, unregistered trade marks, unregistered design rights, copyright and a few other exotic rights that we won't go into here. As will be discussed later, when it comes to unregistered rights, it is crucial that proper records be kept, as when it comes to enforcing them the stumbling blocks often relate to proving the date of creation, authorship and ownership. Although they remain unregistered, many of these IP assets will be critical to achieving a successful launch of the company's product or service. They may however be of limited tangible value above and beyond the value to the product or service to which they relate given the difficulty in enforcing them against competitors and the ease with which they can be designed or worked around. Unregistered rights are often a weapon of last resort, perhaps because the company chose not to seek a corresponding registered right or was unable to have that right granted.

It should be noted that an IP asset might also be some technology, know how, trade mark etc that is licensed in from a third party. These can be extremely valuable, particularly where they provide the company with freedom-to-operate or provide exclusivity in a particular area.

Registered Rights

For the high-tech start-up, the focus is likely to be on patents. Patent rights can be broad in scope. The best case scenario is that a patent establishes a monopoly in an entire field of endeavour, such as might be the case where the company has identified a previously unidentified problem and the patent is able to cover all solutions to that problem. More commonly of course, the company has identified only an improvement to what is already out there in the same technical field. In this case the role of the patent is to monopolise that improvement as well as analogous improvements which provide a significant commercial advantage.

Patents can relate to physical products, software products and services, methods of manufacture and methods of use. Whilst there are a few areas that are excluded from patentability, these are rarely much of a roadblock in the high-tech space and this is not the place to consider them in detail. Suffice to say that if you have created an innovation that is technical or solves a technical problem, it will almost certainly not fall within the exclusions. At least at the outset, take a positive view when you think about the patentability of your innovations.

Patents are generally national rights. That is you get them on a country-by-country basis – but watch out for the new Unitary Patent right covering many of the countries of the European Union. Patents are a limited term monopoly, typically lasting 20 years from filing.

The cost and complexity of the patenting process varies greatly from country to country. Whilst some countries have very strict search and examination criteria, look for example at the US, Europe (EPC) and China, others such as South Africa and France do little more than a formal review of the documents and then stamp them “patented”. Regardless of the process to obtain a patent, in all countries there will be some post-grant mechanism to allow for invalidation of a patent.

iThs can come as a bit of a shock to some entrepreneurs who are disappointed to learn that all of the money they have spent to register a patent might have been wasted in the event of a successful post-grant challenge. Of course, they will see the reasonableness of the system when the boot is on the other foot. What a patent almost certainly guarantees is a deterrent against infringement. It is a barrier that needs to be overcome by any potential competitors. Even if getting over the barrier is not impossible, it may be so burdensome that it is not worth the effort or risk to attempt.

An often overlooked right is the utility model. This is similar in scope and process to the patent. However, it is only available in a limited number of countries (not including the UK) and has a shorter term. Utility models can be attractive due to the generally simple application process, commonly not requiring any substantive search or examination, and the consequentially lower cost. Companies might seek utility model protection when they have a low level of confidence in the inventiveness of an idea but like the idea of scattering a few obstacles around to deter the competition.

A Registered Design right lies somewhere between a patent and copyright. It is defined by a set of drawings showing, typically, a three-dimensional industrial design - Registered Designs can also be obtained for computer graphical user interfaces. Registered Design right is by its nature quite narrow in scope as it is intended for the protection of principally aesthetic features of a product, i.e. those features that make a product better looking than your competitor's product. It is difficult to use Registered Designs to prevent others designing around your product so long as their product looks clearly different. Nonetheless, they have a place, particularly when you hope to build an identity that relies on the look and feel of a product. As with patents, Registered Designs are most valuable when they protect features of a design that will be relatively long lived and that are or will become distinctive of your company. Think for example of the radiator grill on the front of a BMW™ which survives from model generation to generation.

Registered trade marks are also national rights and extend over certain specified classes of goods and services. Unlike the other registered rights, however, they are not time-limited. They can exist in perpetuity and can therefore be extremely valuable. That said, they do need to be taken care of and stroked occasionally to ensure that they continue to be relevant to your products and services and that the marks are not misused, by both yourself and others.A tech start-up will of course be focussed on the tech. Nonetheless, a few key registered Trade Marks are likely to be important, and that importance will grow with success.

All of these IP rights, both registered and unregistered, represent (intangible) assets of the company that can be sliced and packaged territorially, by technical application, and in many other ways.They can be bought and sold, licensed in and licensed out, and even used as collateral for loans.

And don’t forget the need to manage and pay renewal fees on your registered rights and on some applications. Missing payments is at the very least unpleasant and costly, and at worst catastrophic. Your IP adviser will generally assist with these, often working with a third party renewals payment agent. Whilst you can manage these yourself, perhaps to save costs, that is a risky business and best avoided.

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4: First steps

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At the outset it is important to identify critical IP assets and to not disclose these before you have taken professional advice. This is especially true of any assets that you might want to protect with patents, utility models and Registered Designs. Disclosing an idea, unless under strict confidentiality (and even that can be risky), will likely render an invention un-patentable or a design feature un-registrable (grace periods may be available to put the horse back in the stable but this should be considered only as a last resort). Ensure that the company owns the IP or at least has the right to use it by way of a licensing agreement.

Find an expert and invest time in getting to know them. You want to have a long-term relationship – educating a new adviser in your business and technology can be painful - and it is important to get it right from the outset. You will be making some very key decisions and whilst you can change advisers later, the damage may have been done by then. Keep in mind that your most valuable IP assets may well be those that are generated at a very early stage, or which you bring with you into the company, so a change of adviser at a later stage may well be a matter of damage mitigation.

Take advice from those that are further along the road, and educate yourself. Obtain a reference for a trusted adviser. Look for a team that can support you across multiple technologies, jurisdictions and IP asset categories. Be wary of the individual expert that claims to do it all, but on the other hand value an adviser that can take a holistic view. Look for resilience in your advisers. Do they have a team that can provide succession, for example if a key contact moves on? What about financial strength; not yours but theirs? Are they going to pressure you when your funds are limited or your cash flow is tight because they are not financially resilient, even though you are good for the money?

It can be extremely valuable to look at the level of activity in your field and the aggressiveness with which your (potential) competitors enforce those rights; registers of IP rights including patents, designs and trade marks are readily available online.

For example, little activity in these areas might suggest that registered rights are not considered to be of high value in your area although, on the other hand, that might open up an opportunity for you to create a more extensive monopoly. Looking at the portfolios of successful competitors can give valuable pointers on the geographic extent across which you should seek to register your rights.

Whilst trade marks and design rights may be important further down the road, for a tech start-up they are unlikely to be critical at the outset. But do consider these before committing to a design or brand and preferably before you become emotionally attached to either. Brand strategy will be especially important to a company whose products or processes will be customer-facing and not just part of a larger solution which a party further down the line will be selling in reliance on their own brand profile. It is definitely recommended to conduct a trade mark clearance search at an early stage, even a relatively lightweight one, and before you invest any significant resources in branding, to identify potentially problematic third party trade mark rights and help steer a path around these. It is certainly preferable to identify any potential branding issues early when it is cheaper to rebrand, than later when it may be costly to rebrand stock and re-educate consumers.

Make sure you know what you are in for financially. Obtain cost estimates that are aligned with your objectives and set up a process to manage costs based on these estimates. And beware of mission creep that will escalate costs.

Assuming that the start-up is not just you, allocate the internal IP role to someone who has the time and interest to handle it. All too often this role is given as an afterthought, to someone who is already busy with their day job and whose first objective is to offload the role to the next “volunteer”. It is important to maintain documents and good records from the outset. A simple spreadsheet might be sufficient for the latter but as time progresses and the portfolio grows a more sophisticated system might be appropriate.

Finally, set up the processes that are required to follow your strategy and achieve your objectives.

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5: The objectives

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We will come on to strategy later, but a necessary precursor for any strategy is to have a clear understanding of the objectives. At the highest level of course, the objective has to be to generate, secure and manage the company's IP so as to maximise the company's value at a desired point of exit (or investment).This should be achieved within the confines of prudently spending the company's money. Despite its spend on IP, the company needs to have sufficient financial resources to fund all of the other business critical needs. One is not much use without the other.

For the tech start-up, investors and buyers will be attracted to the company primarily by the novel products and services that it has developed, or that it has the clear potential to develop, as well as the key people within the company. Any reputation established for the company's brands will add to the attraction. It will be the novel features and brand recognition that add value to the company's offerings and which will drive (future) profit. The longer those features survive in a product or service the more important they will be. A feature that is only present for a year or two in version 1.0, but which is superseded in version 2.0, will be of very limited value. It depends on the size of the market of course and the market sector, but a feature that is likely to survive for more than 5 years, perhaps more than 10, will be of the greatest value. Clearly then, the crown jewels of a company's IP assets will be those patents, as well as any utility models and Registered Designs, that afford a monopoly in the use of those long lived novel features. A significant investment should be made to protect those features. Moreover, the company should fight hard to achieve the broadest scope of protection for them; it is worth pushing back strongly with any Examiner that seeks to significantly narrow the scope of a patent or other registered right.

So if you have your patents for the key novel and long lived features, fantastic. But everyone likes an insurance policy against any future failure of those patents, e.g. if they are attacked and revoked by a competitor. This is where a second level of patent protection is valuable. These cover features that are not necessarily critical and not necessary long lived, although they will hopefully survive for more than a couple of years, but which do provide some commercial advantage over the competition.

They might relate to ease of use, accuracy, or cost. Whilst the key features falling within the primary layer of protection are likely to have been developed early in the life of the company, or even before, features within the second level will likely have been developed during ongoing R&D. These features perhaps require the most careful nurturing as they can easily be overlooked.

Perhaps a third key strand to the objective is to generate IP assets that go beyond the current, or currently envisaged, products and services, and which look to the future. A company will always be a more interesting target if it can demonstrate a long-term future, i.e. a technology pipeline. This may relate to products and services that are some years off, maybe 5 years plus, and which aren't even the subject of serious R&D at the point of exit.

Investors and buyers will make a distinction between pending applications ("Patent Pending") and granted patents when valuing a company. Significantly more value will be attributed to the latter. Your objective should be to secure grant for at least your primary patents. Of course, pre-grant, the more likely an application is to grant the more valuable it will be.

From a registered trade mark and registered design point of view (subject to the latter being relevant), these should be focussed on current and imminent products and services, perhaps also looking 3-5 years ahead. These will represent a barrier to competition and will secure the work that has been done in preparing for market. They should be aligned with any marketing and sales activity that has taken place.

Considering unregistered rights, "unregistered" does not mean "unrecorded" or "invisible". You should be able to provide accurate and comprehensive records. These should identify the most valuable unregistered rights, e.g. source code and design drawings, together with proof of title and date of creation.

An objective in itself should be to be able to demonstrate, at the point of exit or investment, that the objectives set at the outset and developed over time were achieved by a structured and well managed process, driven by internally developed and acquired resources including key individuals. Even the most secure IP assets are at risk if not managed properly. Investors are investing principally in future potential and being able to demonstrate well managed processes and appropriate resources will reassure them that the existing assets are safe and that there is every reason to expect that future generated IP assets will be similarly identified and secured.

In summary, the key objectives of an IP driven tech start-up, insofar as protecting its IP assets is concerned, should be to:

- Obtain patents for the key novel and long lived features
- Provide an insurance policy by obtaining patents for less significant features but which still provide a commercial advantage
- Seek patents for products and services which, while not current, demonstrate a future pipeline of innovation
- Obtain registered trade marks and potentially registered designs for current and imminent products and services
- Have in place processes and people to manage existing and future IP assets
- Have an awareness of IP at all levels and of the importance that the company places on its IP
- Have in place documentation relating to key unregistered rights

The question left hanging here of course is how big should your portfolios be. I am sure a Google™ search will provide us with some rules; If you invest $x in R&D you should spend $y on registering IP and you should obtain $y/a patents and $y/b trade marks. There may be some merit in such an objective approach and investors may have a portfolio size in mind for a given investment. It can also be helpful to look at the portfolios of companies in similar fields that have been successful, and unsuccessful. This information can often be publicly available in listing prospectuses for example. Founders should definitely be reviewing these prospectuses and their IP sections when determining their objectives.

We have not yet considered in any detail the thorny subject of freedom-to-operate or FTO. It is thorny because of the potentially huge scale of a detailed FTO exercise and the associated costs, and because of the uncertainty of the results. Especially for complex products and services with many features and functions, some of which are novel and others of which are already part of the state-of-the-art, an FTO exercise which provides absolute assurances is nigh on impossible. Assuming we are talking about experienced investors, they will appreciate the challenges. They will however expect that all issues that the company has come across will have been thoroughly investigated and the risks assessed. This will have required expert input from the company's advisers. Whilst an objective cannot be to determine FTO with absolute certainty, one should certainly be to analyse and assess all known risks. Additionally, where risks have been identified, appropriate products and services should have been adapted to minimise risk.

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6: Fine tuning your objectives

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Given that registered rights are territorial, you will need to identify the key territories in which you wish to register your IP assets. Whilst there are mechanisms to reduce filing and prosecution costs across multiple jurisdictions, such as the European Patent Convention for patents and the Madrid Protocol for trade marks, registering an IP asset in individual countries comes at an inevitable cost. Keep in mind that the need to pay renewal fees on granted rights, as well as on some pending applications, extends those cost far into the future, escalating year on year.

You should prioritise territories according to market size and potential, and according to the locations of existing and likely future competitors. If your competitors are small in number and located in a small number or countries, that might be key in defining your territorial strategy. If they are larger in number and more geographically dispersed, then this may change the approach. Of course a blended strategy might be appropriate. You will also need to think about the cost of registering IP in particular countries versus the effectiveness of the registered IP. It might not be worth acting in a given country where registration costs are high and the enforceability of those rights is low.Also bear in mind that your objective is likely to include obtaining granted patents at the point of exit. If this is the case, you might prefer to avoid territories which, although potentially important, are slow to grant rights. Keep in mind that many countries offer the option to accelerate prosecution and potentially grant. This is likely though to bring costs forward.

The perceived value of registered IP assets to investors and purchasers must be considered. With the exception perhaps of some niche products and services, at least in the high-tech space, investors are likely to perceive US patents as having a significantly greater value than patents in other countries. In deciding how to spend your IP budget, consider whether there is more value in a larger number of assets protected in a smaller number of countries, versus a smaller number of assets protected across a larger number of countries. From experience, the former approach is likely to result in a more attractive and valuable portfolio of IP assets.

In the case of patents, utility models and registered designs, a challenge is that decisions on territories for individual assets need to be made early. It will probably not be possible to add countries further down the line. The situation is different for trade marks where protection may be sought at any stage, although there are risks if others seek protection in the meantime. Once again, in setting your objectives it can be helpful to look at how the competition has behaved. An established and successful competitor is likely to have a well worked out filing strategy.

As for trade marks, considerations when selecting the territories for protection may be different. Firstly, timescales – do you expect to start operating in a particular territory within the next 3-5 years? If your launch in a territory is likely to be further in to the future than this, then you need to keep in mind that in most countries trade mark registrations become vulnerable to challenge for non-use once they have been registered for 3-5 years, so you don't want to apply too early, unless you see value in filing to put your flag in the sand and to act as a defensive registration. Secondly, think about protection in markets where you may not want to sell your products but where manufacturing may take place, and thirdly, you may want to consider protection in countries known for prolific counterfeiting of goods, or countries where trade mark "squatting" is particularly rife.

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7: Avoiding the pitfalls

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Protecting your IP assets does require a degree of perseverance. The process will inevitably throw up surprises and sometimes disappointments – for example, a patent examiner may identify extremely relevant prior art that casts doubt on the novelty of some key feature. Assuming you have faith in the products and services that you are developing, you should stick with the strategy, albeit perhaps tweaking the objectives. Having said that, flexibility is important. If it transpires that some key feature cannot be protected, divert the allocated budget element to protecting some other feature that provides a commercial advantage.

It is important to keep up the momentum. Many companies back off from seeking IP protection after they have filed applications, or obtained patents for the features seen as key at the outset and which provide the foundations for the company. These applications may fail down the line and it is important to file applications for the secondary features to provide additional strength to the portfolio and as an insurance policy.

It is very common for companies to fail to identify important assets prior to them being disclosed. Such a disclosure will likely make it difficult or impossible to subsequently obtain valid patent protection. Disclosures, either by publication in writing or on the web, by showing or selling a product or service in the absence of an NDA or confidentiality agreement should always be preceded by an internal review to assess the merits of seeking protection and, if necessary, filing appropriate applications. This needs not only regular reviews, but also an awareness on the part of all employees of the company's strategy and the rules around IP protection. We have talked about the importance of having a resilient IP strategy. If the strategy is not resilient, problems will arise. For example, the member of staff responsible for IP may move on. For a small company this will be especially problematic as it may be difficult to quickly replace them. A strong relationship with your external IP adviser will be critical. The adviser needs to be aware of the company's IP strategy and objectives, and should be able to act proactively and sometimes independently. The adviser will be key in transitioning responsibilities to the replacement internal resource.

Companies are often not sufficiently ambitious when it comes to protecting their IP assets, taking the view that what they are doing is not that clever or sufficiently distinguished over what is already known. More often than not, a novel feature or application that provides some commercial advantage will be patentable. Obtaining patent protection for such features adds another layer to your IP protection and to the company's value.

They can take the view that something that they are working on is at too early a stage, or is too conceptual to provide the basis for a patent. Whilst patent laws do have a requirement for the applicant to provide an enabling disclosure, that is to provide the skilled person with information sufficient to allow the skilled person to actually implement the invention, such details are often easy to provide prior to your having a working prototype in hand. As a rule, the earlier that you file for a patent, the broader the protection you are likely to obtain.

Perhaps the most critical pitfall en route to achieving your objectives is the possibility that you run out of cash or hit cash flow problems. Unfortunately, the processes for seeking to register IP can be unforgiving – there are deadlines that have to be met and that have associated costs. Careful cost forecasting and budgeting is key. This must include some contingency to cover unexpected events, e.g. difficulties in overcoming Examiners' objections and the filing of applications for unexpected features. IP costs will almost always be more than you optimistically hope for at the outset.
Often, the cooperation of staff is important when it comes to seeking to register IP. The signatures of inventors and designers, directors and owners, are often required on legal documents. Failing to obtain these can be painful and costly, and sometimes fatal.These are best obtained when everyone is happy and cooperating, usually at the earliest possible stage. So try to ensure that all important agreements are in place as soon as possible. In the event that signatures are required at a later stage, look to obtain these before staff depart or make sure that there is an understanding that staff will be reachable and happy to cooperate following their departure.

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8: Top tips to grow your patent portfolio

Robert Lind

Chapter 8:Top tips to grow your patent portfolio

Having identified those IP assets that merit patent protection you need to decide how best to efficiently achieve granted patents in your key territories. There may be good reasons to take a slow and cautious approach, for example to defer costs and the need to commit to specific countries, or because you are not sure how your technology will develop over the coming years. It may however be beneficial to be decisive, bringing forward some decisions and costs, in order to have granted patents in place at the time of exit. If this fits with your strategy, the following tips might be helpful.

File early in the key territories. For example, if you consider the US or Europe to be key, file your application first in one or both of these, rather than filing elsewhere in the first instance and using the 12 month priority period. This can take a year or more off the time that it will take to reach grant. In the US you can also pay a fee to have your application subjected to prioritised examination which, though significant, can save costs in the long term as well of course as accelerating grant. In Europe, the PACE request for accelerated search or examination serves a similar purpose although does not require a fee.

It is almost inevitable that patent offices will raise objections during the examination process. Depending on the jurisdiction, the terms for responding to each cycle of objections can range from 2-6 months (give or take). If you have to go through several cycles of response, and you delay your response at each cycle, this can add many months or even years to the process. So respond quickly if you want to accelerate grant.

In many jurisdictions, and in particular the US, Examiners are happy to discuss issues with the applicant or their representative. In-person interviews are often not possible, and even if they are they can be costly. However, telephone or video interviews are a useful and cost-effective alternative. Interviews can be used to add context to an invention, giving the applicant an opportunity to explain the commercial background and hopefully commercial success of a product incorporating the invention.

In the case of a video call, there might also be an opportunity to demonstrate a real product which can be invaluable when all the Examiner has had to look at to date is a dry written description. For a similar reason it might be appropriate to send a sample product to an Examiner, although be wary of course if the product has significant value as that could be viewed as an attempt to improperly sway the outcome.

If you have a difficult Examiner, and you are finding it hard to push through claims with a scope that you would like, consider offering a narrowing amendment, assuming that this still covers your product or service. If you can achieve allowance for the narrowed claims, you will get your granted patent but will (usually) have the opportunity to file a divisional application to give yourself another chance to argue for broader, or different claims.

On the subject of divisional applications, make sure to review applications in good time before they are granted to see if there are any valuable features that are not covered, or sufficiently covered, by the allowed claims. It is particularly true that those applications that you file at an early stage in the life of the company may have such features. Divisional applications will allow you to protect valuable features that are not covered by the claims of the original application. Divisional applications will generally be examined, and hopefully granted, on a quicker timescale than the original (parent) application.

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9: Expansion and growth

By Robert Lind

Expansion and growth will usually entail recruitment. When identifying talent it might be worth taking into account any IP experience that applicants have had and particularly experience in the patenting process. If a new hire's experience of patents has been relatively painless, they may not only be likely to identify patentable innovations but will be likely to push these forward and remain engaged throughout the process.

IP education of new joiners will be an important part of the process. New joiners should be made aware of the IP strategy and of the company's objectives. Online IP training may be an efficient way to bring them up to speed quickly. Of course, the need for confidentiality should be driven home to reduce the risk that key IP is disclosed prematurely, particular when new joiners are coming directly from an academic environment in which publications are a key focus.

Expansion and growth will likely include an increase in the quantity of IP assets. Assuming that you have in place an efficient process to identify protectable innovations (patents, designs etc.), and you don't have unlimited financial resources to invest in IP, you will likely need a process to filter submissions and identify those that are worth seeking to register. Commercial relevance will of course be key. But also think about getting some quick wins, that is IP assets that might be registered relatively painlessly and therefore cheaply. For patents, this means innovations that are seen as very clearly novel and inventive. This can be useful in building up the IP balance sheet. A handy reference to assess whether or not to pursue patent protection for an invention is provided in the Appendix.

Inevitably, filtering out those assets that will not be pursued to registration may result in disgruntled inventors. If an inventor ends up having all of his or her proposals rejected, he or she might be less likely to make proposals in the future. This requires careful balancing, and at the very least praise and encouragement.

More IP assets will of course result in the need for more internal resources. This should be factored in when planning recruitment and when budgeting for future IP spend. Some re-budgeting will likely be necessary. This will be a tricky balance as growth will likely entail increased spending on salaries and the like, putting pressure on the IP budget.

Evaluating your potentially protectable inventions and designs is not limited to a pre-filing exercise and should be undertaken regularly to ensure money is being spent on commercially valuable IP assets as your company grows. For example, perhaps the technology area of a patent application is no longer important to the business. Alternatively, maybe technology has developed which makes the IP asset easy to work around, or the geographical market for the invention changed. All of these factors should be considered regularly when evaluating an IP portfolio and as your company grows. Where an IP asset is no longer valuable or relevant, it may be possible to redirect costs to more important IP assets (e.g. by abandoning patent applications that are no longer relevant). Alternatively, these assets can be maintained as a “patent thicket” to deter competitors, or assigned or licensed out to other companies to generate income.

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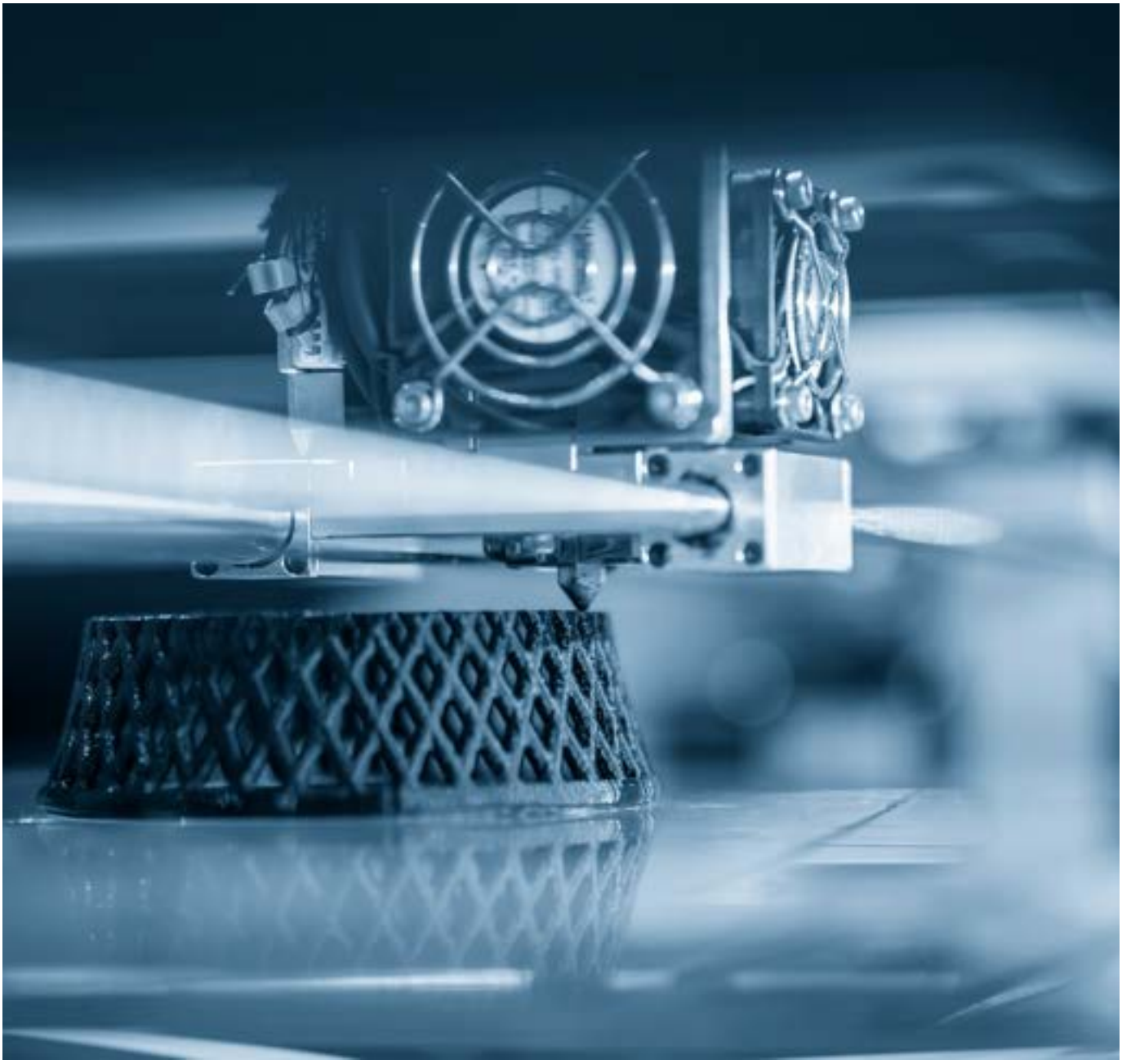
10: When times get tough

By Robert Lind



Chapter 10: When times get tough

It's all very well to have clear IP objectives and a well thought out strategy to achieve those objectives, but the life of many start-ups will throw up challenges that cause a rethink. Chief amongst these is cash flow of course. Even the best laid plans can be upset by unexpected product test results and cost overruns, or failure to receive expected investment.

In this situation, you might want to do the opposite of some of the "top tips" previously discussed; for example slow down prosecution and new filings, including divisional filings. Keep in mind though, that in the short to medium term, costs may be lower for granted patents than for pending applications. So if there is a quick route to grant, perhaps you should take it. The easiest way to save costs is of course not to file new applications and abandon some of the existing filings. When choosing to do the latter, consider those applications where things are proving difficult. The costs involved in a few rounds of examination can be greater than the cost of a new filing. This has to be balanced against your objective of obtaining broad protection for your key IP assets in key jurisdictions. You may hit tough times when it comes to progressing with the registration of key patents. Much of the process is unpredictable, and objections may be raised which will make it difficult or impossible to have your patents granted, at least with the scope of protection that you would like. It is easy to get disheartened when this happens. But the citation of relevant prior art can be a spur to further innovation as it may help to identify the reasons why a technology has not previously been successful. By analysing the prior art and seeking to improve upon it, new and commercially significant innovations may be developed and provide a basis for further patent applications. The technology destination of many start-ups will come as a surprise even to them.

It is worth noting that the value of a company's IP assets is likely to be very closely linked to the company itself. In other words, don't assume that there will be a ready market for the sale of IP assets. Those are likely to be of little value when the company itself has failed to exploit the technology to which they relate. That is not to say that it will be impossible to sell or licence out the assets, but it will probably be a fire sale at best.

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11: Exploiting your IP assets

By Robert Lind

Chapter 11: Exploiting your IP assets

As the company progresses you will accumulate IP assets, both registered and unregistered. At the point of exit, you will hopefully exploit these by virtue of the value that they add to the company. But that value comes from either the real value that has been achieved by the prior exploitation of the assets or the foreseeable value to be achieved in the future.

In the case of a tech start-up, it is unlikely that you will have exploited value by selling an IP asset in its entirety. Even if that option were to be available, a company targeting a future exit or sale would be unlikely to look at an option that merely adds cash to the balance sheet. A more likely scenario is a company licensing out its IP in return for royalty payments. IP assets can be carved up in many ways to maximise their value. Assets may be carved up by country or by application. Within such a carve-up, licences can be exclusive or non-exclusive. Maximising revenue from a licence is of course important, but so is maintaining the option to enter future agreements. When negotiating a licence with a willing licensee, you are trying to achieve a win-win outcome to maximise the incentive on the licensee to succeed and generate licensing income for the licensor. However, licences should have some provisions covering the event that the licensee underperforms for some reason. These provisions may include some minimum royalty payments or an option on the part of the licensor to cancel the license in such circumstances.

Bear in mind that a first licence, or first few licences, may be key to securing further licences. A discount may be considered for those first through the door. Early licences can also demonstrate potential at the exit point.

Registered IP is a clear indicator of a company's innovative behaviour and its desire to carve out a space in the marketplace. Whilst being subtle about it, there is significant benefit to be gained by publicising your approach and its successes.

Whilst observers might be cautious about the value of your shouting about a particular US patent being granted, they will likely take notice of some report on your overall filing and grant numbers, as well as statements concerning the importance that you place on seeking robust protection.

It's also worth keeping in mind that the existence of IP rights sometimes might not be enough of a deterrent to prevent competitors from launching infringing products or services. A large competitor with deep pockets may, for example, take the view that an early-stage start-up will not have the money or bandwidth to fight a lengthy legal battle to defend its IP position. One way a start-up can guarantee a fairer fight if fierce competition is anticipated is to take out an IP insurance policy that will cover litigation costs if and when court action becomes necessary. Insurance might not be cheap, particularly when a large IP portfolio is involved, but it may help convince competitors – and investors too – that you are serious about defending your market position and potential for growth. Even if no IP insurance policy has been secured a priori, financing for litigation may still be available through litigation funders who may agree to help with the legal costs in exchange for a share of any damages.

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12: Owning your IP

By Robert Lind

Investors, buyers and licensees will all want to see that you do in fact properly own your IP. It can be a huge headache to find out during a due diligence exercise or licence negotiations that assignments and other transfer documents were not properly completed or stored. You need to be able to show a paper or electronic document trail clearly establishing ownership of all valuable IP, starting with the creator, e.g. the inventor or designer, and finishing with your company.

Registerable IP rights are often filed in the names of individuals prior to a company being established. This often cannot be avoided and is particularly likely to happen in the case of an entrepreneur taking his or her first steps towards commercialisation. Sometimes a company name change or sale further confuses the ownership issue.

In other cases, the original parties may not be available to sign, or may for various reasons want to make life difficult; parties who are more than willing to sign a document at the time of an intended transfer can often take a different view later, especially when IP is seen to have significant value. Sorting out these kinds of issue early on and making sure that there is a correct and unambiguous chain of title for any IP rights will pay dividends further down the line.

Assignments from one party to another, e.g. from an individual to a company, should be made in writing, prepared with appropriate legal advice and executed at the time of the transfer. Verbal assignments or retrospective written assignments should be avoided. Transfer documents should be stored with other valuable company papers. Joint ownership of rights is not recommended: it is usually best to have a single owner and to deal with other parties using side agreements such as licences.

For patents, only those who were key to making the invention should be named as inventors. Avoid the temptation to name those who made only marginal contributions, e.g. to keep “the team” happy.

A patent application is not a scientific journal publication. The more inventors that are named, the more likely it is that problems will arise in the future. On the other hand, it is essential to make sure that none of the key contributors to an invention are omitted. Inventorship is a question of fact and is the starting point for determining who is entitled to a patent. Getting it wrong can have severe consequences – the patent even may be deemed invalid in some cases – so take proper advice on this. Also keep in mind that some jurisdictions will always require an assignment from an employee inventor to an employer, even when the employee's contract makes it explicit that IP rights belong to the employer. It is advisable to have the employee sign a confirmatory assignment at the outset.

It is also worth bearing in mind that you will be unlikely to own all the IP you wish to exploit and may need to license some in from third parties, in a mirror image of your own licensing out. Contracts for both licensing in and out will need to address issues such as remuneration (upfront fee, milestone payments, royalties etc.), commercialisation obligations and whether any exclusivity is conferred with reference to territory or technical application.

Financial modelling for licences is a complex exercise but the general rule of thumb is, the later in the developmental stage you license your IP out and the more exclusivity you confer, the more money you should be asking for. In some sectors, such as the pharmaceutical industry, exclusive licensing is the norm whereas in others, such as off the shelf software, non-exclusivity makes more sense. An exclusive licensee will usually want to take over the patent-filing strategy and any attendant costs and the right to go after infringers.

One final point. Before you use any Open Source Software (OSS) to generate your own IP check the licence terms carefully. You don't want to find that "copyleft" provisions in the OSS licence in any way limit your ability to assert ownership rights over or commercialise the technology you have built on top of that software.

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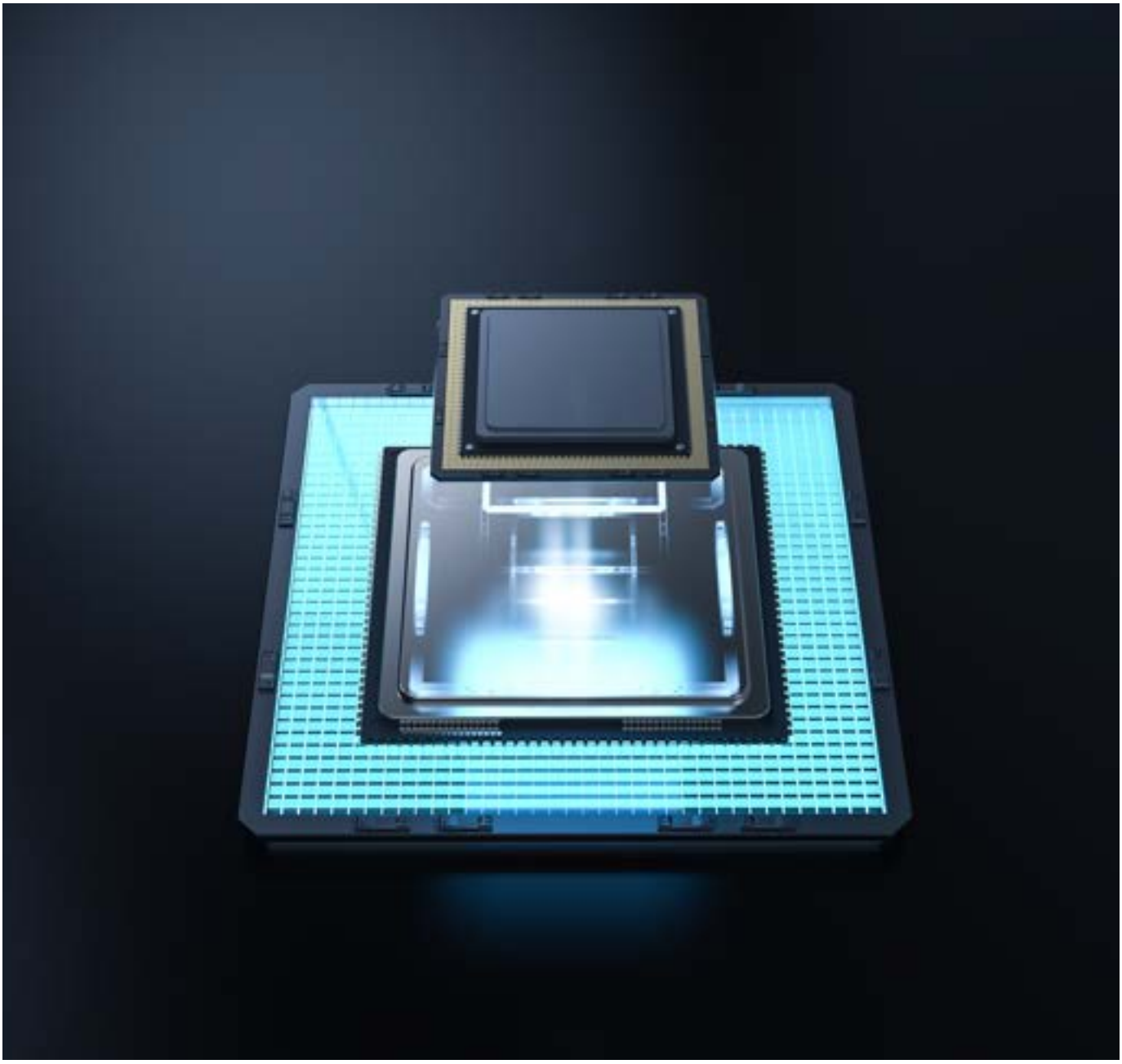
13: Routes to market

By Robert Lind



Licensing is perhaps the most common means of an IP-orientated start-up exploiting its technology; it may not have the resources or expertise to make or sell the relevant products itself so it licenses a third party (or third parties) to do so along the lines discussed above. A good example of this is a biotech start-up developing a small molecule compound with therapeutic efficacy against defined disease targets for which patent protection is obtained. The biotech company licenses that patent to a large pharmaceutical international which further develops and takes that compound to market as a finished drug and pays the biotech company a royalty in return.

However, sometimes the start-up may wish to sell products into the market itself. If it does so, it may still need to appoint a manufacturer to make those products on its behalf. In such circumstances the key IP provisions to look out for are:

- The manufacturer should be granted a licence to use the relevant IP to make products for the licensor only; and
- There may be scope for the manufacturer to develop a manufacturing process, scale up an existing one or even improve the product design. All such developments may comprise IP and some of it may even be patentable. The licensor will want access to (and preferably ownership of) all such developments.

In selling into the market the start-up may sell to customers direct, in which case it should be aware of the additional legal obligations involved in selling online and/or to consumers or, if it needs third party help to access a particular market, via an agent or distributor. Their respective roles are as follows:

- The distributor buys the product from the principal and resells it to the customer; and
- The agent introduces the customer to the principal and picks up a commission when the principal sells the product to that customer, as happens with a theatrical or literary agent securing a deal for their client.

A licence to the IP in the technology or design of the product may not be necessary in such circumstances but, if the agent or distributor is promoting the product, it may need a licence to the principal's branding and other marketing materials. Furthermore, if the agent or distributor generates its own promotional materials or has the original ones translated into the language of the country where the customers are, the principal should ensure that it secures ownership of the copyright in that new material so it can still use it if it appoints a replacement intermediary.

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14: Is your IP exit-ready?

By Robert Lind

Chapter 14: Is your IP exit-ready

When preparing for an upcoming exit, you need to review many of the topics discussed above. Make sure you have sought registration for your key IP assets, and look to accelerate the registration process where possible and for the most important rights in the hope that you will have nice shiny registrations to highlight in your investment prospectus. Make sure you have any ownership loose ends tied up and make sure that official IP registers, most of which will be publicly available, record the owner correctly. Even if the chain of title is correct in a legal sense, it will be at the least embarrassing if this is not correctly reported in the registers. Look to finalise any licensing deals, in or out, ahead of the exit, and consider also registering these on the official registers where this is possible (both practically and commercially).

As you will almost certainly be required to report on the company's IP, e.g. in a listing prospectus, it might be helpful to create a draft at an early stage, adding to it over time. This will help to maintain a focus on the value being generated by the company's IP and will help you stay on track to achieve your objectives. It can also be a resource to evidence the IP that you bring to the table (so-called "background IP") when entering into joint venture agreements.

Your report will need to cover the relevance of your IP to your products and services. Hopefully, your IP assets will be aligned with your current and likely future products and services. This should have been an ongoing consideration. But check again; it is all too easy for them to diverge. If this has happened, for any applications that remain pending, consider making amendments to alter the scope and cover the products and services. Consider also filing divisional applications seeking different scopes of protection if this is possible and advantageous.

You will also need to disclose to a potential investor or buyer all the contracts you have entered into to develop and commercialise your IP so, if they were not carefully considered when they were entered into, this will come back to haunt you.

Missing, ambiguous or onerous contracts will deter investors and buyers or give them an excuse to drive the price down. When assessing the due diligence requirements of company exit, picture all the hoops you have to jump through to sell your house and multiply that by ten.

For that reason, this mind set of good house-keeping should be adopted from day one so that, if you ever need to sell the company or attract investors, you can hit the ground running and not end up trying to get everything together in a mad panic at the last minute. Even if you never sell the company, such an organised approach will make running it so much easier and more profitable. Also, remember that, although patent and trade mark attorneys and IP lawyers cost money, if you use them properly from day one it will in the long term save you money. Cutting corners at the beginning can in the long run result in a mess which is very expensive (and sometimes impossible) to sort out further down the line.

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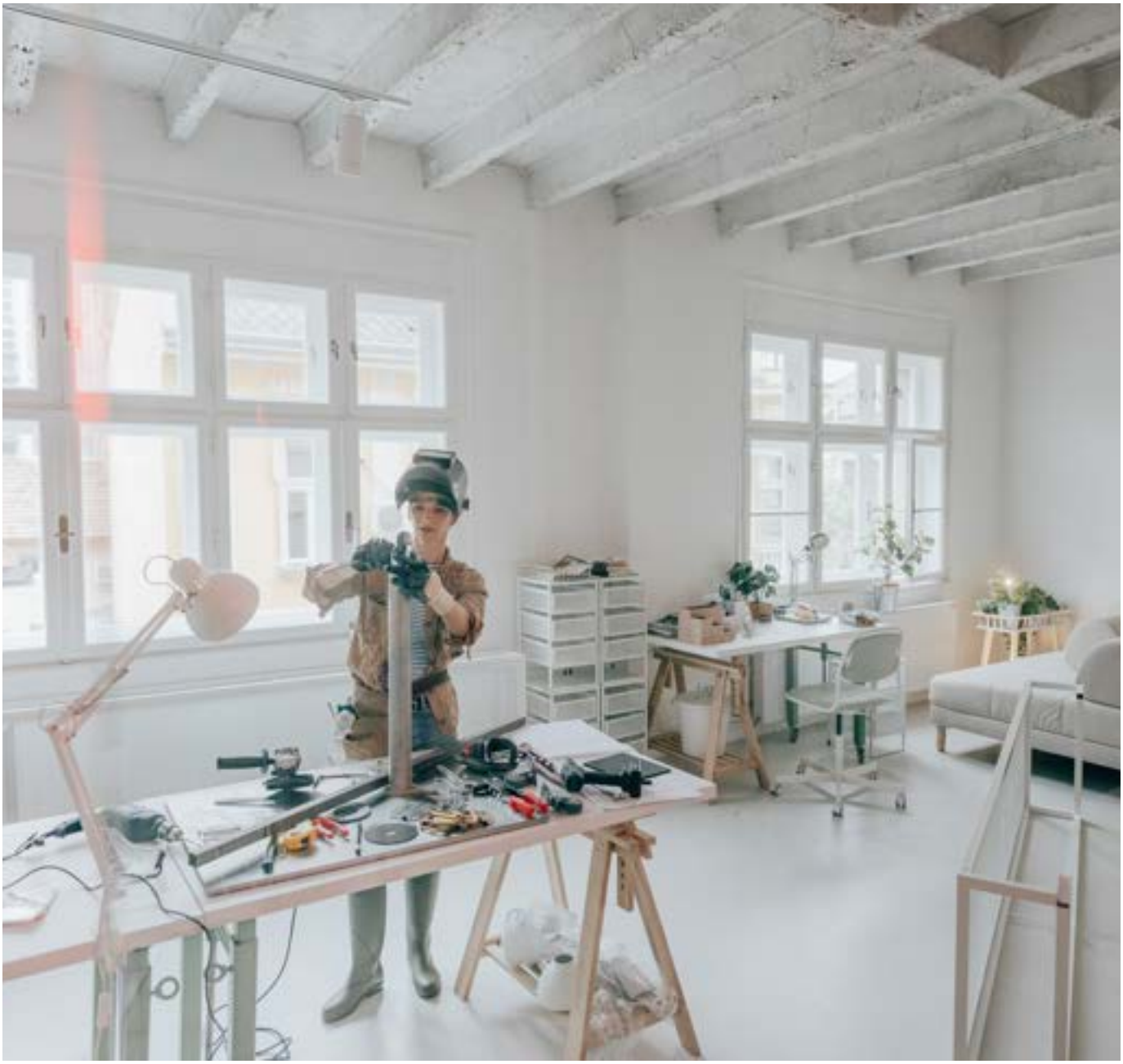
15: Conclusion

By Robert Lind



Take an optimistic view of the registerability of your IP rights and in particular of the patentability of your inventions. But take professional advice and don't waste time and energy pursuing rights where the chances of success are low and the costs high.

Background research is essential. This can help identify the key technical challenges in your field and focus your innovation effort. It may also flag freedom-to-operate challenges at an early stage, when the opportunity to design around competitor IP is greater.

Don't be afraid to take difficult decisions concerning pending applications. Weigh up possible future costs with the value and chances of success. Within a fixed IP budget, there may be better ways to spend your money.

Finally, make sure you have the right processes in place, to identify the most valuable IP assets, register these if possible, and manage your IP portfolio. To do this you need to have internal resources with the right expertise.

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16: Appendix

By Robert Lind

Factors to consider when evaluating whether to pursue patent protection for an invention:

Innovation

- How innovative is the idea? Just an engineering variation or truly innovative?
- Is the idea useful in practice?
- Is the idea technical (does it solve a technical problem) or is it more related to administrative or business considerations?
- Does the idea have real world feasibility, including cost?
- Is it robust and will customers want it?

Product Value

- What is the size and location of the existing/potential market for the product?
- What is the commercial value of the invention to the business?
- Is it in a strategically important area?

Patent Value

- Does the product line already have patent protection? If so how strong is it, and how many years of protection are left?
- How competitive/litigious is the market?
- How relevant is the known prior art?
- What is the lifetime of the product? Patents last for 20 years and typically take 3-5 years to grant.
- How easy will it be to detect infringement by competitors? Conversely, is it preferable to maintain the idea as a company secret rather than seek patent protection and publish details to the competition?
- Is the idea clearly owned by you? Has there been a collaboration, and was ownership of intellectual property agreed?
- How easy will it be for competitors to workaround the patent if granted?
- Are there secondary reasons for wanting patent protection, e.g. Patent Box tax provisions, marketing value?

Robert Lind | Partner

Robert graduated from Glasgow University with a BEng in Electrical and Electronic Engineering, and followed this with a PhD in Bioelectronics, researching electrode interfaces for recording signals from in vitro neural networks.

Robert has extensive experience across a large number of technical areas. In his early career he worked in-house for Nokia Mobile Phones working on 3G and 4G mobile telephone systems.

He continued in this field for other clients, moving onto 5G systems and other wireless and Internet-based communication systems. Other related areas of interest include computer security and very high speed manufacturing. More recently, Robert has worked on technologies more closely related to his academic background, and has advised a number of exciting start-up projects in the areas of bioelectronics and DNA analysis, both medical and consumer focussed. Robert also leads the firm's engagement with the motorsport industry and is an active participant in the Motorsport Industry Association.

Robert takes a pragmatic proactive approach to his work, avoiding rigid patenting strategies and preferring to tailor his approach for each client based on a thorough understanding of where the client is trying to get to. Robert sees the education of his clients as being critical to their success and is happy to provide either formal or ad hoc in-house training. He considers patents in the wider context of a client’s IP, advising on related know how, designs, trade marks and copyrights, knowing when it is appropriate to

involve colleagues with specialised technical or knowledge in certain areas. Robert has had success in rapidly building patent portfolios for his clients in order to provide a solid basis for company valuation and investment.

Robert is Marks & Clerk's partner in charge of the firm's new and unique offering for the start-up community contact him directly via our website www.marks-clerk.com.

"We view Robert as an extension of our team and he supports very diligently and responds swiftly. He understands our business and technology very well and is able to turn around drafts with minimal inventor input and clearly identifies the kernel of the invention."- IAM Patent 1000, 2022

"Bridging the gap between the life sciences and high-technology spheres is Robert Lind, a bioelectronics PhD who also has deep telecommunications know-how…always goes the extra mile to fully understand the technology and the client's long-term business strategy." - IAM Patent 1000, 2021

Chapter 16: About Marks & Clerk LLP

Marks & Clerk is a leading international intellectual (IP) firm and home to experts that are on hand to provide a distinctive and disruptive service offering that is highly tuned to the requirements of the sector.

Over the years, we have worked with numerous tech start-ups and spin-outs, as well as with entrepreneurs – helping them identify, protect, enforce and maximise the value of their intellectual property. Many have secured investment or succeeded with other commercial aims as a result of our work. We work closely with our clients to consider the steps that need to be taken to manage growth and avoid IP assets slipping through the net.

We are incredibly proud of our track record but we never sit still for long. Once again, we have listened to the needs of the market and this time responded with a brand new offering for the start-up and early stage community that is unique to Marks & Clerk. On a case by case basis, our team of experts will assess the requirements of the world's most innovative, promising, high-tech start-ups and invite them to make the most of resources and our unrivalled breadth and depth of IP expertise - at a competitive, transparent cost.

Get in touch. Our collegiate way of working means easy access to the relevant experts. This in turn means we are able to offer the same agile approach as smaller IP firms - while delivering the expertise of a global player. To speak directly to the partner in charge of this new offering, please contact Robert Lind via www.marks-clerk.com.