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Views on an evolving automotive industry

The importance of a clear IP strategy

The emergence of new automotive technologies including in respect of connectivity and autonomy and the 'electric revolution' is undoubtedly a key factor in driving investment, disruption and R&D in the industry. Such technology now touches on all aspects of automotive development; from new in-car sensors, cameras and inter-connected devices to new propulsion or fuel systems. With this technology comes intellectual property ("IP") rights of material value, protection of which is likely to be critical for any industry participant's commercial strategy, freedom to operate (including with regards the launch of any vehicles embodying new technologies) and R&D investment returns.

Following on from the previous edition of our series of articles (see Views on an evolving automotive industry - standards and essential patents) which looked at evolving technology standards in the industry and the patents and FRAND licensing issues involved, this article considers the necessary elements of a successful IP strategy and the heightened importance of such a strategy in the context of an industry where new systems and technologies are taking centre stage.

The renewed significance of a clear IP strategy

IP is a hot topic in the automotive industry, not least given the industry is increasingly reliant on digital technology. Nowadays even an 'entry level' new car contains a host of electronic features, including integrated navigation and wireless entertainment/communication systems, and driver assistance technology such as blind spot sensors, adaptive cruise control and parking cameras are increasingly offered as standard. These features are now considered to be included as the 'norm', with consumer expectations ever increasing.

Examples of how IP rights assist the automotive sector

Patent: inventive products or processes eg LiDAR sensors for scanning different distances and the use of 5G for vehicle connectivity

Trade secrets: key technical know-how; confidential technical information in algorithms and data sets

Registered design right: the appearance of the vehicle, including lines, contours and shape

Copyright: software controlling the vehicle's braking system

Trade mark: vehicle's brand name and logo.

Prior to the development and integration of such new technologies, IP strategies could arguably have been reliant upon a limited set of specific IP rights such as key registered design rights relating to the appearance of vehicles and trade marks in the form of vehicle brands and logos. However, given the new reliance on digital solutions and the fast evolution of technology systems, such basic IP strategies are quickly becoming out-dated, with the re-evaluation of existing approaches being essential.

Different categories of business (including ICE electric/hybrid and autonomous vehicles) are also seeing different consumer focuses, with some consumers now prioritising in-car technological innovations (eg safety features) over the traditional 'brand loyalty'. It therefore follows that OEMs in particular can no longer simply rely on their headline brand to protect business value in an increasingly competitive field.

Additionally, with the pressure on R&D budgets, OEMs are increasingly looking externally for the development of some of the key IP that now underpins their vehicles and the software required to run them. Consequently, the focus on IP in the automotive industry not only stems from the emergence of new technologies, but the wider landscape in which IP is developed and owned.

These external sources of IP range from technology companies, start-ups and artificial intelligence companies to universities and non-practicing entities, each having different commercial aims and methods of commercialising their IP. Some may seek a formal long term collaboration whereas others may prefer licensing models or the complete sale of their owned IP rights. Such collaborations are inevitably between companies where business models and ethos may differ. Equally, automotive participants, at least traditionally, may be less familiar with and less focussed on the broader IP landscape of nascent technologies as opposed to more traditional holders of technological solutions.

In summary, therefore, a clear IP strategy reflecting the overarching commercial aims of the relevant business with the buy-in of relevant business stakeholders is critical. Any IP strategy needs to be adaptable to reflect changes to technology, the sourcing and harnessing of this technology, and the business's wider strategic direction so as to ultimately ensure adequate contractual provisions on the ownership, protection and use of IP. In doing so, the strategy should also account for any significant differences in the treatment of IP rights in commercially relevant jurisdictions to help ensure the relevant business is in the best possible position to maximise the duration and value of its IP, and ensure that the business can act promptly in the event of unauthorised use and/or access of IP, including for trade secrets where it is vital to stop dissemination as early as possible. Any IP strategy will also fail to have the desired effect without clear and robust governance processes to give effect to the same.

Some more specific core elements we would anticipate in any well-developed IP strategy are summarised in the remainder of this article.



The Fundamentals of an Effective IP Strategy

An effective IP strategy should:

1. be practicable and reflect a business's commercial strategy whilst accounting for the pace of change in the automotive sector;
2. protect the fruits of a business's investment in R&D and maximise the return on that investment; and
3. mitigate the risk that it will not have freedom to operate and launch vehicles embodying new technologies.

IP due diligence and mitigating freedom to operate ("FTO") risk

At a time when industry players are seeking to strike a very difficult balancing act of increasing R&D spend in the context of the electric revolution in parallel with uncertainties over revenues due to the impact of the Covid-19 pandemic, the global semi-conductor shortages and the transition in sales from ICE to EVs, board rooms will inevitably be under increased scrutiny in respect of R&D returns. Likewise, it is clear that any loss of the same due to a poorly designed or implemented IP strategy will simply be unacceptable.

In this respect, from an IP due diligence risk management strategy perspective, it is critical that an established procedure for FTO searches is integrated into a project's development (taking into account any relevant contractual protections afforded by underlying agreements in the context of technology collaborations). Given the costs of comprehensive FTO searches and the risks of relevant unpublished patent applications and design changes during development, differing levels of FTO searching should be considered at various phases of a project's development. This will assist in identifying and accounting for key risks at an early stage. It will also help to capture patent applications published after the prior FTO searches and ensure that the FTO covers design changes.

An effective IP strategy should therefore have clear governance on FTO searches and build a close working relationship between the development team and the patent attorneys. Not only will a close working relationship improve the quality of the FTO searching and its results, it will also promote the early identification of IP developed during that project. This will allow steps to be taken to mitigate risks arising from development change or by seeking to invalidate the identified right.

Capturing innovation

Protecting the fruits of and maximising the return on an investment in R&D

When considering this aspect of an IP strategy, businesses must deal with:

1. how innovation and IP is captured;
2. the optimal method of securing and protecting that IP;
3. how to commercialise that IP; and
4. how rights can be effectively enforced

More widely, an effective IP strategy must also consider how best to incentivise and capture IP, whether this is generated during the normal course of business or as part of a collaboration. Any process or scheme for capturing IP must be effectively communicated to anyone who may generate IP, such that they know what to do and why this is important to the business. Without this context, those generating IP may see any process or scheme as introducing an unnecessary administrative burden, such that it is not complied with in practice. A practicable process can only be generated with clear communication and simple guidelines that will be understood and followed, with a key element of this being the importance of maintaining confidentiality.

This is important in several contexts. First, without clear confidentiality arrangements both with employees but also collaborators (and, where appropriate, suppliers), the ability to protect any inventions as trade secrets or by the filing of patents will be lost. A trade secret, as defined by the Directive on the Protection of Trade Secrets, needs to be identified as such and reasonable steps taken to keep them secret. This therefore requires a close working relationship between those managing IP and those generating it to ensure that this can be demonstrated when the business needs to take enforcement action against any misuse of such trade secrets.

Second, employees, collaborators (and relevant suppliers) need to understand the restrictions on their use of confidential information outside of the context in which it was shared. For example, employees and collaborators should understand the restrictions and consequences of their use of a business's confidential information outside of their employment or the specific collaboration, particularly if they then go on to work for or collaborate with a competitor.

IP "incentive model" considerations

- Not "one size fits all" – a variety of schemes or models can be used to promote the rapid capture of IP.
- Most effective schemes depend not only on the nature of the IP being generated but also the nature of the people generating it – different people are motivated by differing incentives.
- Motivations range from peer group recognition to purely financial incentives.
- Any approach should recognise that there is a limited pool of talented employees who have the requisite skills to innovate in these new technology areas.
- Relevant laws relating to where R&D is being undertaken may have to be considered, such as any laws governing the ownership of IP generated by employees and employee inventor compensation (eg section 40 of the UK Patents Act 1977).

Some comfort for those businesses whose employees leak confidential information to a competitor came recently in the form of a UK Court of Appeal decision (*Travel Counsellors v Trailfinders* [2021] EWCA Civ 38). The Court of Appeal held that the competitor had a duty of confidence to the original business where the recipient is told such information is confidential or where the recipient ought to have reasonably understood that the information is confidential in the given circumstances. Whether this duty applies in a particular scenario will depend on the context and the questions that the court considers the competitor business should have asked, but notwithstanding this, it should ring alarm bells with those approached by a competitor's employees offering their services and insider knowledge.

Optimising the method of protecting and securing IP

Another vital aspect of risk mitigation strategy is having a clear approach to optimising the method of protecting and securing IP.

In this regard, in some cases, only one type of IP right may be applicable for an innovation; in other cases, the innovator may have alternatives to choose from or there can be multiple rights in one innovation. Some of these require registration with the appropriate Intellectual Property Offices, some are able to be applied for internationally and others nationally, some arise on record and others require applications and detailed description to be protected. This requires considered management of a business's IP, including an analysis of each innovation and the IP rights and

know how/trade secrets that are generated or could be registered in respect of each.

Equally, it is not always obvious to businesses how best to use IP to protect their investment in innovation. Each type of IP right can have advantages, but also constraints, and may require specific steps at a particular point in time. Businesses need to decide, often at an early stage (in particular with registered rights such as patents or registered designs), how technology is to be protected and secured and to establish internal processes so that their ability to be granted or to enforce these rights is not adversely impacted.

Some examples of some key forms of IP and potential decisions to made in respect of the same are summarised in the boxes below and on the subsequent page.

Patents vs Trade Secrets

In a fast-moving industry or with fast-moving technologies such as some of those that are impacting the automotive industry, the increasingly short product lifecycles and the rapid pace of product development can be out of step with patent protection. The time consuming process for the filing and granting of patents can mean that they are unavailable to enforce during the short window in which that technology is at the forefront of the industry and prior to it becoming outdated or obsolete. For technologies that are likely to become obsolete within a few years, companies may not be willing to dedicate the time and money to obtain a patent and may instead simply seek to rely on trade secrets. Furthermore, to obtain a patent, it is necessary to sufficiently disclose the invention to enable others to carry out the invention, which is a price that businesses may be unwilling to pay or one that does not make commercial sense. In contrast, trade secrets can be an immediate and flexible tool to protect innovations, but should only be considered if it is an innovation that can be kept secret and cannot be easily determined by reverse engineering.

Appropriate consideration	Trade secret	Patent
Nature of information	Need to keep it secret? Meets requirements to be 'confidential'?	Ok to make invention public? Meets requirements to be 'patentable'?
Length of protection	Until no longer 'confidential'	Maximum 20 years from filing date
Enforcement	No exclusive right or strict liability	Exclusive right and strict liability
Exploitation	More difficult to exploit / licence	Relatively straightforward to exploit / licence
Costs	Manageable but consider protection costs	(Relatively) expensive



Copyright and functional designs

The decision of the Court of Justice of the European Union in Brompton Bicycle has effectively revived copyright in technical and manufacturing designs. Copyright has a much longer term than the design rights that may have been these items' sole protection previously. Manufacturers should consider whether and how they might wish to enforce this. See our blog post [here](#) for further details.

Copyright is the principal right used to protect software, design and website content. Copyright in work done by an employee within the normal course of their employment will be owned by the employer. Consequently, agreements with non-employees/consultants/software designers and external design agencies should be reviewed to ensure that rights are either assigned or licensed to the business to enable its full use of the work product.

Trade marks

Trade marks can be words, logos, sounds, shapes or even holograms – almost anything that does the job of distinguishing goods and services of one business from another. In the future “sharing economy” will automotive brands be as significant as they currently are to consumers? Although often synonymous with brand names already, perhaps design and technology will play an even more significant role.

Since, unlike other IP rights, trade marks can provide a perpetual monopoly if they continue to be used and do not fall prey to effective challenges, they have been sought to be used to continue protection for key products (including vehicles) once other rights have expired. Such was the case with Jaguar Land Rover's application for a shape trade mark in the form of the shape of its Land Rover Defender model where the High Court in 2020 upheld the UK IPO's decision to refuse the applications on the basis that they lacked distinctiveness. The three-dimensional shape of the London black cab taxi had been registered as a trade mark but was found invalid when assessed by the Court of Appeal in 2017, again for lack of distinctive character. Thus shape trade marks as a means of long term protection for car designs look unlikely to be successful unless very different to other car designs.

Protection of Data

Data is a valuable asset that can be either retained or licensed. As connected and autonomous vehicle (“CAV”) technology develops, businesses need to be aware of how data can be protected and their obligations around its use. As well as any relevant contractual protections that may exist for collaborations, there are IP rights that can protect data (see box: How IP rights can protect data) and one particularly powerful one in this regard is trade secrets or confidential information law.

As CAV technology develops, there will also be an increasing need to appreciate the difficulties surrounding the protection of algorithms interpreting data and, in the future, AI systems. To this regard, it should be noted that relatively little protection is afforded to software by traditional IP rights, and there are significant difficulties in protecting the core AI (which might be considered software), as IP policy and law continues to grapple with fundamental issues in this area. This can be seen in the recent consultations by the major patent offices, including that of the UK Intellectual Property Office and decisions of IPOs worldwide not to allow AI to be cited as the inventor of a patent (the DABUS applications).

Right	Protects	Against
<ul style="list-style-type: none"> • Copyright • sui generis Database right • Trade marks (& passing off) • Patents • Confidential information/ Trade Secrets 	<ul style="list-style-type: none"> • Recording/expression of data including database structure • Investment in obtaining, verification or presentation of data in a database • Branding/indication of origin of data • “Innovation”/invention eg: a mechanism for collecting or analysing data – including algorithms/ software if there is a “technical” effect • The data itself 	<ul style="list-style-type: none"> • Copying of that expression of the data • Extraction or utilisation (all, substantial part or regular) of data from the database • Use of the brand, unfair advantage, brand dilution (or misrepresentation) • Anything incorporating the invention whether done with knowledge of the invention or otherwise • Use or disclosure of the data without permission

Commercialising IP

Whilst a clear part of an IP strategy as referenced above is risk focussed, any successful strategy also needs to focus on opportunity in equal measure. Whilst traditionally OEMs have predominantly commercialised their IP by manufacturing and selling vehicles, they should now also be considering alternative ways of commercialising their IP to maximise the return on their investment in R&D given the new technology focussed outlook.

This effort to maximising investment return can include looking to cross-licence IP (whether as a standalone cross-licence or as part of a broader collaboration) that provides access for the

business into new technologies or areas covered by another party’s IP. Here, the emergence of new market entrants, particularly those with a business model that is driven by computational or communication technologies, or data, provides an OEM with greater opportunities to commercialise the business’s IP in this way. This cross-licencing and even collaboration is likely to only increase in the future, with it already being apparent that tech companies, such as Google and Apple, are overtaking the more traditional industry participants in their applications for patents for automotive technology, particularly in the sphere of connectivity and self-driving cars.

Even in the absence of such cross-licensing opportunities, it may be possible to monetise IP by licensing-out for use in other fields beyond the automotive industry. The advancing of new technologies and the potential for their application in unrelated fields only increases this opportunity.

When considering licensing options and an effective IP strategy, it must reflect (and be informed by) the overarching commercial strategy that the business is seeking to implement. For example, does the business have enough resources and expertise in licensing to implement this, if not, is the business prepared to make the necessary investment (both in time and money) to pursue this? Will it be a distraction or otherwise diminish the business's key commercial aims? Any IP strategy that is not fully aligned with the business strategy (and does not have the support of the key business stakeholders) is likely to be sub-optimal.

The commercialisation strategy must as a result reflect the risks that a business is prepared to take. Here, issues such as the scope of licensing (exclusive by use or field or sole licensing) and the nature of the IP licensed must be taken into account. For example, the licensing of a registered right may carry less risk than the licensing of confidential information and trade secrets, since the latter licence will involve disclosure of the valuable trade secret or confidential information and the licensor will need to rely on the licensee to maintain confidence and accept the risk that the confidential nature of the information may be lost, even inadvertently.

Enforcement

Finally, irrespective of the substance of an IP strategy, effective enforcement is essential to meet the overarching commercial aim of the business and be consistent with a business's attitude to risk. A one-size-fits-all approach is unlikely to be effective. Some key considerations are: (i) in which jurisdictions should enforcement be taken; (ii) the ability to work-around the IP right and the risk it will be invalidated; (iii) which rights can be enforced; (iv) the speed of enforcement and the available remedies; (v) the potential for counter-suits; and (vi) any public relations or investor relations risks.

The increasing move to the external development of IP and market participant collaboration only amplifies the need to carefully take into account the above considerations, particularly on the basis that

this development and/or collaboration are likely to occur on a cross-jurisdictional basis, requiring the consideration of differing IP laws and regimes.

When considering the jurisdiction in which enforcement should be taken, this may involve consideration of where the infringer manufactures its products, what its key markets are and what procedural or legal factors could affect the ability to achieve the commercial aim. For example, will enforcement in that jurisdiction allow for rapid (interim) injunctions and, if so, is such relief easily obtained and what liability arises if it is later found to have been wrongly obtained.

SK Innovation/LG EV battery trade secrets dispute

In February 2021, the US International Trade Commission ("ITC") held that SK Innovation ("SKI") had misused rival LG Chem's ("LGC") trade secrets in relation to its EV batteries.

Reuters reported that LGC had accused SKI of stealing trade secrets by poaching over 80 of their employees. LGC supplies Tesla and General Motors but had lost out to SKI, which supplies Ford, in bids for supply to Volkswagen. The ITC issued a 10 year exclusion order prohibiting imports of SKI's lithium batteries into the US, although also holding that some components of the batteries may still be imported by SKI (for Ford for four years and for Volkswagen for two) and that SKI was also allowed to replace batteries in Kia vehicles sold to US customers. SKI threatened to close its US factory unless the decision was overturned, as it could have been by President Biden (who has publicly supported the EV industry). In the end, the companies came to a settlement in April 2021, by virtue of which the ITC decision was set aside.

ITC actions are increasingly being used where civil proceedings (including patent actions) might have been used in the past. They are an effective means of interrupting supply, leaving the defendant needing to manufacture in the US in order to continue to sell there, and can also be seen as a motivator for settlement negotiations.



Future-proofing your IP strategy

It is now more vital than ever that industry players consider and implement an effective IP strategy that reflect their commercial aims and the evolving industry landscape.

Given the trend towards more technology in the automotive industry will only increase, with the advent of fully electric vehicles and emerging CAV technology, from an IP perspective, businesses should now more than ever focus on the optimal way to protect and exploit their technology assets. This is particularly important given the widening of the industry with the entrance of new market participants, in the form tech companies whether as allies or competitors.

Further, the increasing adoption of technology, computer programs and data has resulted in the increased importance of the protections afforded to confidential information and trade secrets, which, with proper implementation of internal processes, can be immediate and flexible enough to protect a broad range of technology, especially where other IP rights may not be applied so easily.

In this context, industry players should actively consider the full breadth of IP protection options in order to establish the most appropriate right or rights to use in any specific context.

Ultimately, whilst broad principles such as those referenced in this article should be applied in any effective IP strategy and its governance, the detailed aspects of any such strategy must be developed taking into account the specific requirements of the business structure and commercial aims of the relevant industry player.

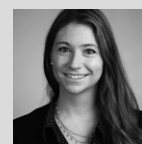
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