

ALIGNING IP STRATEGIES WITH BUSINESS OBJECTIVES UP AND DOWN THE SUPPLY CHAIN

Jacob Woolbright¹, Carol Nielsen² and Jennifer Morton³

I. Introduction

Scholars have long recognized that economic progress depends on the creation and diffusion of new ideas. Innovation, however, is driven endogenously by a complex set of factors, and what drives innovation is not straightforward or simple. Notwithstanding, the generation of technological development is clearly influenced by at least three factors: (1) the supply side of innovation; (2) the financing of technological development; and (3) intellectual property rights. Each of these factors can affect the trends of developments in any one or more technological areas at a time.

As such, profits from capitalist institutions are recognized as a major requirement for new technologies to emerge and for innovation to flourish. Likewise, the financial markets play a central role in the pace of innovation. Banks, venture capitalists, private equity firms, and other financial institutions redirect wealth to where it is needed, and use the profits of others to fund and invest in technology. Return on investment is determined, at least in part, via reward structures, which in turn are determined by government policy and by private institutions.

Moreover, most of the literature on technological development adheres to the argument that the expectation of profit drives inventors to innovate and (WHAT IS A FEATURE?) is a feature of modern economic growth models (“the demand side”).⁴ Market size, for example, exerts a powerful influence on research and development. Shifts of investment and expansion of markets have been followed by shifts in patents.⁵ The speed of technological development can be correlated with the fluctuations in prospective demand. Yet, under certain circumstances, even when the societal returns may be great, certain factors that relate to the demand side of innovation act as constraints, particularly where there is an anticipated limit on profit expectations. Furthermore, a closer look at the supply side of innovation reveals that focusing exclusively on the demand for new technology ignores the effect that laws and economic environments have in shaping the amount and availability of innovation.

In fact, intellectual property rights are so important in the United States that the current administration has appointed the country’s first U.S. Intellectual Property Enforcement Coordinator.⁶ As reported, IP-intensive industries create 27.1 million jobs and indirectly support another 12.9 million jobs.⁷ Thirty percent of all U.S. jobs are directly or indirectly attributable to IP-intensive industries.⁸ Sixty percent of all US exports are goods from IP-intensive industries

¹ Jacob Woolbright, Howard and Howard PLLC, Royal Oak, Michigan

² Carol M. Nielsen, Nielsen IP Law LLC, Houston, Texas

³ Jennifer G. Morton, Nielsen IP Law LLC, Houston, Texas

⁴ Nicholas, T., *What Drives Innovation?* Antitrust Law Journal, No. 3 (2011), at 798.

⁵ *Id.*

⁶ CREATE, CREATE Briefing: Victoria Espinel Discusses IP Protection (Jan. 19, 2010), www.create.org/views-blog/create-briefing-victoria-espinel-discusses-ip-protection.

⁷ *Id.*

⁸ *Id.*

and these goods account for about \$5.06 trillion in value added, or 34.8 percent of U.S. gross domestic product.⁹ As such, in the United States, intellectual property is widely acclaimed to be a major economic driver.

Hence, foundations for reward, such as the patent system and related laws and policies, make productive pursuits of technical advancement more likely to occur. Most importantly, the rewards associated with innovation influence both the demand side of innovation, by generating more opportunities for profit, and the supply side of innovation, by determining and often enhancing, the pool of potential innovators and broadening the number of possible collaborations. Then, it is this pool of innovators and increased collaboration that creates the need for thoughtful, positive working strategies amongst the contributors of new technology, the suppliers of product and services, as well as consumers, in order to fuel advancement of modern day business and growth. This is particularly true up and down the supply chain. In the supply chain, the entity that participates in such collaborations will reap the rewards of innovation as stimulated by intellectual property systems and associated rights in intellectual property, even though the strategies employed to obtain the rewards may differ depending on the position that the entity occupies.

II. The Supply Chain and Innovation

As one can appreciate, producing and selling quality products is extremely important to generate profits and to have a profitable business. Yet, equally important is an efficient and flexible, demand-driven, supply chain for such products. Particularly in today's global economy, a consumer-driven adaptable supply chain is a necessity to gain and maintain a competitive advantage. As such, the supply chain can be a powerful driver for profitable business performance.

A. Anatomy of the Supply Chain

Basically, the supply chain represents a system of business entities, people, information, and a wide variety of resources that produce and advance a product or service from a raw material to the end product desired by consumers. In its fullest extent, the supply chain often represents a very complex and dynamic network. Participants in the supply chain must manage manufacturing logistics and coordinate the activities associated with marketing, sales, product design, finance and information technology. Therefore, while the relationships between buyer and seller along the supply chain can have a very positive effect on profits and the production of new technologies and innovation in general, significant challenges are presented to those operating in the global supply chain.

B. Innovation in a Supply Chain

In order to harness an entity's particular supply chain position and leverage that position to obtain improved collaboration and innovation, each entity should build a foundation of strong communication between the entity and its upstream suppliers and downstream customers. Close communication along the supply chain often results in information sharing and joint problem

⁹ *Id.*

solving. This information sharing becomes routine so as to increase the direct and indirect interaction with supply chain partners. These communications, in turn, expose different approaches and perspectives which influence the ability to generate different alternatives and facilitate flexible thinking. These different approaches often lead to innovation. By having the various supply chain partners working in coordinated efforts with one another, each organization is provided with a multitude of interfaces which are at different positions than itself in the supply chain.¹⁰ Interfaces between those along the supply chain in turn provide each organization with access to a greater breadth of knowledge.

These alliances between entities located at different positions within the supply chain are critical and provide important foundations for companies which seek to improve products and services through increased innovation. The consequence of interactions between buyer and seller can produce both “incremental and radical innovation.”¹¹ The quantity, scope and mode of interactions between a company or firm and various outside entities are fundamental to the learning process for both parties and form a basis for knowledge transfer. This “relational embeddedness” of the parties partaking in the supply chain is grounded in the level of trust and commitment between the parties and the parties’ adoption of information technology. The “embeddedness” is also affected by external factors, such as the stability of product demand and the network connections within and across industries.¹² Therefore, the relationships between businesses will differ at different positions along the supply chain and often depend on the complexity of the manufacturing and distribution channels and the end product sold. Moreover, the position of an entity along the supply chain can affect its relationships between customer and supplier.

Because entities located in each position in the supply chain seek to innovate, they often collaborate with one or more entities to innovate and develop new products. At the heart of these collaborations is the sharing of information. The information shared amongst collaborators can take many forms, such as know-how, confidential information, or more concrete intellectual property rights, such as patents and trademarks. The sharing of information and rights forms the foundation for the ‘intellectual property supply chain.’

C. Managing Supply Chain Risks

Risks in the global supply chain are often assessed in terms of impact, likelihood and interconnections. As noted by experts in the field:

To improve management of uncertainty in a complex world, it is necessary to accept that we will not get safeguards right the first time. Regulations have often been viewed as a way for authorities to signal to the public that they are in control of a situation, but in a complex system this control is often an illusion. While we should start by considering counterfactuals in order to anticipate possible outcomes of regulations, it is even more important to define broader system

¹⁰ A value chain is referred to as activities of the entity performed specifically to add or deliver value to the product or service.

¹¹ See, e.g., Roy, S., et al., *Innovation Generation in Supply Chain Relationships: A Conceptual Model and Research Propositions*, Journal of The Academy of Marketing Science, Vol. XX, (2003).

¹² *Id.*

safeguards. Such safeguards need to be flexible and dynamic enough to adapt to changing information and should closely involve stakeholders in the co-production of new types of regulation.¹³

As acknowledged by economists, some of the biggest supply chain challenges include: (1) customer service; (2) cost control; (3) planning and risk management; (4) supplier/partner relationship management; and (5) talent. Of these challenges, planning and risk management most often warrant a tremendous amount of effort. Risk management, properly handled, ensures that the relationships between entities along the supply chain remains stable so that innovation can and will advance, the business can prosper and the economy can grow.

In recent years, the protection of intellectual property in the supply chain has become an emerging area of business concern and research.¹⁴ Furthermore, there are major risks that are associated with ignoring intellectual property rights. There are recognized similarities between intellectual property issues and other issues in the supply chain, such as product safety and supply chain integrity.¹⁵

Because intellectual property rights serve to incentivize the development of new and improved products and services, yielding greater profits and reward for new business, the relationship between the supplier and customer can evolve into a deeper trust relationship when technical collaboration initiates. Often this relationship will materialize into a formal joint development agreement, or on a larger scale, a joint venture company. Alternatively, if either party fails to innovate, with the advent of sophisticated new technological developments and advances endlessly on the horizon, both parties risk the introduction of low cost alternatives, design-around developments by third parties, loss of exclusivity of intellectual property rights and market share, and counterfeit products.

Therefore, while the number of different solutions to managing intellectual property and associated risks in the supply chain is vast, basic good practices include forming a solid contractual arrangement. Contractual arrangements must include general considerations and terms directed towards the protection and enforcement of key intellectual property rights owned by each party, and how the rights in and to new developments will be shared and exploited. Product branding and protection of party trade secrets should also be considered and resolved in these contractual arrangements. If these contractual arrangements are competently negotiated with the business objectives of each party in mind, the arrangements can offer great advantages and opportunities for the individual businesses involved.

¹³ 2012 Insight Report, The World Economic Forum (Jan. 25, 2013), www.weforum.org/docs/WEF_GlobalCompetitivenessReport_2012-13.pdf

¹⁴ See, e.g., *Maturity in Responsible Supply Chain Management*, Stanford Initiative for the Study of Supply Chain Responsibility, White Paper, December 4, 2012.

¹⁵ *Id.*

III. What are the Rewards and Issues at Different Entry Points of the Supply Chain?

The issues at play for entities involved in product innovation and development changes depending on what position that the entity is in along the supply chain. The same strategies employed at one position along the supply chain may not be effective at a different position. Furthermore, the same entity may have multiple business units, with each business unit occupying a different position on the supply chain. Each entity may play the role of a customer and vendor, an agent and distributor, and a producer and a creative. Because of these different roles, each business unit should be mindful of its intellectual property strategy to best protect its interests and navigate the challenges associated with its particular position in the supply chain.

Entities located at different positions along the supply chain face different challenges, have different constraints, and have different incentives. Therefore, each entity should consider its position in the supply chain when collaborating with other entities. As such, the challenges, constraints, and incentives can be managed when structuring the legal framework for the collaboration. For example, the interests of an entity located in front-end of the supply chain may be pitted against the interests of entities located in the middle and back-end of the supply chain. Thus, the interests of the entities located at the front-end, middle, and back-end of the supply chain are often divergent, especially with respect to intellectual property rights.

The structure for sharing information and rights among collaborators along the supply chain is formed by contracts. The selection of contract terms typically varies depending on what position the entity occupies in the supply chain and the extensiveness of the supply chain. These contracts may provide structure regarding 1) terms of confidentiality; 2) ownership of rights resulting from collaborative effects; and 3) pre-alignment of ownership of intellectual property rights, including patents, trademarks, or trade secrets, which may be involved in the collaboration.

The extensiveness of collaboration can vary widely, and often is determined by the commercial success of the targeted enterprise. Nonetheless, it is important to define the intellectual property rights and obligations in advance to avoid costly litigation and disputes down the road. Depending on the extent of collaboration, the parties involved can grant more or less rights.

A recent example of a dispute that could have been avoided through appropriate contractual agreements stemmed from the collaboration between Douwe Egberts and Philips relating to the Senseo coffee machines. Douwe Egberts and Phillips disagreed as to who owned which aspect of the Senseo coffee machine product. Ultimately, the dispute resulted in Douwe Egberts owning the intellectual property rights associated with the coffee pods and Philips owning the intellectual property rights associated the novel design of the machine itself.¹⁶ Although involved collaborations can be complicated to structure, it is better to spend the time and resources upfront to address each party's expectations upfront to avoid these costly disputes at a later date.

¹⁶ Economist Intelligence Unit, *Companies Without Borders: Collaborating to Compete* 15 (2006).

A. Front of Supply Chain

Entities located at the front-end of the supply chain take a perspective of intellectual property rights that reflects the fact that any product sold by a front-end entity is transferred among several other entities, and sometimes changed or converted into another product, before that product is transferred to an end user. Often front-end entities do not expect market exclusivity at each and every downstream position along the supply chain, especially when the exclusivity is based solely on a patented raw material component. In part, this is due to the fact that even if the product or component is protected in the form of patent, market realities may not allow sale of an exclusive product as the market may not bear a new material unless a competitor offers a comparable product. These market realities may require that the entity at the beginning of the supply chain license its intellectual property rights to a competitor if it wishes to commercialize a new product. In light of these challenges, front-end entities often find themselves benefitting from collaborating with entities positioned at the middle and back-end of the supply chain.¹⁷

Front-end entities that collaborate with entities positioned in the middle or back-end of the supply chain may enter a new technical field or market more successfully than it could have achieved by simply organic growth within the front-end entity. This front-end collaboration often takes the form of shared information, samples, market intelligence, and transferring of manufacturing expenses. These collaborations can also allow the front-end entity to avoid the large upfront costs involved in bringing a new product to market through this collaboration.

As with entities located in other positions along the supply chain, it is often advantageous to define the relationships that front-end entities have with middle or back-end entities through contracts. This is particularly true for front-end entities which have many relationships with downstream entities. Although in an extensive collaboration, such as a joint venture, the agreement will often involve the formation of a separate legal entity and intellectual property considerations are then handled upfront and in one agreement.

Defining the collaboration of two entities through the creation of a contract rather than a legal entity is particularly useful when the collaboration is of narrow scope and/or has a finite duration. These types of relationships are appropriate when the activities of the collaborators are sufficiently distinct (in either a technological sense or a commercial sense) such that the separate entities can coexist without harming each other. These front-end contractual relationships are often formed for purposes of early stage collaboration, such as pre-commercialization research and development.¹⁸

Although a front-end entity is capable of collaborating with other entities in a wide variety of ways, there are a few strategies relating to management of intellectual property rights that are particularly suited to the front-end entity. In certain circumstances, these strategies may also be employed by entities located at other positions along the supply chain. These front-end IP management strategies, organized in order of increasing collaboration, include pre-emptive

¹⁷ Gordon V. Smith & Russell L. Parr, *Intellectual Property: Licensing and Joint Venture Profit Strategies* 20 (3d ed. 2004).

¹⁸ Robert Goldscheider and Alan H. Gordon, *Managing Intellectual Property Allocation in Joint Ventures; Licensing Best Practices: Strategic, Territorial, and Technology Issues* 212 (2006).

filing for patent rights; formation of non-disclosure agreements; formation of sampling agreements; and formation of joint development agreements.

1. Formation of a Non-Disclosure Agreement

Before front-end entity parties decide to share confidential or otherwise valuable information, it is advisable for the front-end entity to enter into a non-disclosure agreement with the target middle or back-end entity. The typical non-disclosure agreement will typically require that the communicated information not be shared with third parties. Even though these non-disclosure agreements are often executed before large amounts of money change hands, it is important to be diligent in drafting this type of agreement as a narrow definition of ‘confidential’ information could lead a court to understand that certain information that was disclosed is not within the scope of the non-disclosure agreement. Such a narrow construction of the agreement, however, could result in the forfeiture of intellectual property assets. To prevent this outcome, front-end entities should be certain that definitions of ‘confidential information’ in these non-disclosure agreements captures anything of value that might be possibly shared with the entities located downstream of the front-end entity. Furthermore, it is important to instill discipline in the entities’ employees by clearly communicating the meaning of confidential information to all relevant parties avoid inadvertent disclosure.¹⁹

2. Pre-Emptive Patent Filings

A front-end entity may consider “pre-emptive” filings of patent applications before contacting another entity for collaboration purposes in order to protect innovations brought into the collaboration, particularly where the early investment made was independent of the collaboration. Pre-emptive filings are appropriate if an agreement has not yet been reached with the downstream entity, and the front-end entity has already invested resources in the core technology. Although a later executed non-disclosure agreement may prohibit such patent filings by the middle and back-end entities, the filing of the patent application at an early date serves to solidify an entity’s intellectual property rights at an early stage. This is especially important now that the U.S. is a first-to-file jurisdiction.

In order to minimize costs, these pre-emptive patent filings often take the form of a provisional patent application. Although the provisional patent application lacks detail in one or more areas, especially when the front-end entity is not an expert in the technology of the applicant, the disclosure of the provisional patent application can be later bolstered at the utility stage of patent filing. Furthermore, the rights ultimately derived from the provisional patent application can later be assigned or licensed if the collaboration is successful, thus providing an additional asset that the front-end entity can offer during negotiations with downstream entities.

¹⁹ Mehlman, S.K., et al., *Better Practices for Managing Intellectual Assets in Collaborations*, 53 Research Technology Mgt. 55, 2010.

3. Sampling Agreements

Sampling is often essential to generate interest in a new product at the front end of the supply chain before the product is commercialized. However, because sampling can allow one customer a head start on patenting end uses, front-end entities should be cautious in providing samples. If the front-end entity stands to profit from such sampling, it is important to form sampling agreements that address what entity will own the end-uses of the sampled material. These ‘end-use patents’ can be the most important patents to obtain as they have the strongest direct connection to the end-user marketplace. The sampling agreement should specify whether the entities to the agreement are entitled to file patents based on the non-commercial samples and which entity will ultimately own these end-use patents, if they are granted. Sampling agreements may also contain non-analysis clauses when sampling products which can be reverse engineered to provide an additional safeguard against inadvertent disclosure of non-patent intellectual property.

4. Joint Development Agreement

If the front entity cannot develop a new product without active involvement of an entity down the supply chain, it may be advantageous to arrange a joint development agreement between the front-end entity and one or more entities located downstream. Joint ventures and collaborations are widely used in many high-tech industry sectors where IP rights are particularly important. These ‘joint’ business models are increasingly popular and an important business model for achieving growth.²⁰ However, these types of collaborations are fundamentally more complicated than one-time transactions, such as mergers and acquisitions, due to the ongoing development efforts that arise after the agreement was executed. These ongoing development efforts may necessitate consideration of who owns the intellectual property rights that may develop during the relationship.

Front-end entities must be mindful of two primary considerations as they consider joint development agreements with downstream supply chain participants: (1) incentives for downstream participants; and (2) protection of the front-end entity’s own interests. Because useful rights are often developed or acquired by the parties after execution of the agreement, parties should agree to a procedure for determining whether, and on what terms, the ownership of such rights will vest in the interested parties. If the agreement does not address these situations in advance, major issues can arise regarding the determination of who will own any future intellectual property rights and who will be permitted to exploit it. In the U.S., it is important to remember that patent ownership vests in the inventor unless a contractual obligation exists. Thus, to avoid unintended default results, the agreement should specifically address these considerations.

In negotiations with the front-end entity, it is likely that downstream entities will seek the ability to patent end-use applications. It will be difficult for the front-end entity to completely forbid patenting of end uses, while retaining the right to patent the evolving front-end product.

²⁰ Nigel Parker, *Intellectual Property Issues in Joint Ventures and Collaborations*, 11 J. Intellectual Prop. Law & Practice 2 (2007).

In such an arrangement, the balance of equities is misallocated. The downstream entities may wonder why it should participate in the collaboration if success results in competitors of the downstream entity being able to buy the front-end product in anticipation of offering the same end-use product.

Front-end entities can reconcile its own interests and the interests of its downstream collaborators by granting an exclusive license to the collaborator for a limited term, and push for minimum purchase requirements. Alternatively, the front-end entity may allow the downstream collaborator to obtain end-use patents or have an exclusive license, but in exchange, the front-end supplier may obtain immunity for a period of time.²¹ Furthermore, front-end entities may consider field-of-use clauses to allow exclusivity in the downstream collaborator's industry, but not in other industries that may be of interest to the front-end entity.

Licensing is also particularly attractive option for many front-end entities who seek to provide incentives to downstream entities. First, intellectual property rights can last longer than the collaboration.²² Thus, if the front-end entity is the owner, rather than licensee, they will retain a remainder interest in the intellectual property rights if the collaboration ultimately ends.

Ultimately, it is important for both parties to the joint development agreement to be mindful that many of the projected future intellectual properties may never materialize.²³ Therefore, parties in joint development agreements should appreciate that certainty in defining ownership and development of all future intellectual property rights is likely an unrealistic expectation.

B. Middle of the Supply Chain

Collaboration for entities in the middle of the supply chain present distinct challenges, due to the lack of control in that these middle entities may be constrained by both upstream suppliers and downstream customers. Nonetheless, these middle entities may find collaboration valuable, especially in industries where marketing, distribution, and regulatory costs would otherwise be prohibitively high. By collaborating with others downstream or upstream, a middle entity may enter new markets and attract growth. For example in the pharmaceutical segment, where new product development costs are extremely high, many larger pharmaceutical companies seek relationships with smaller drug development companies to acquire new potential products to submit to FDA regulatory testing, thus minimizing the research expenses involved in new product developments.²⁴

The lack of control experienced by many middle entities is attributed to the following factors: being contractually limited at both sides of the supply chain; inability to sell or use new developments of others that will improved the product or service; and necessity of licensing with companies imposing high royalty burdens. The negative impact of these constraints can be minimized by focusing the middle entities' IP development efforts on the development of

²¹ It is important to address the anti-trust issues involved in exclusive agreements. Many jurisdictions permit five to seven years of exclusivity in properly structured joint development agreements.

²² J. Bleeke and D. Ernst, *Collaborating to Compete: Using Strategic Alliances and Acquisitions in the Global Marketplace* 15 (1993).

²³ *Mehlman* at 59.

²⁴ *Economist Intelligence Unit* at 15.

technology platforms; collaborating at both ends of the supply chain; and development of non-patent intellectual property.

1. Developing Technology Platforms

Due to the lack of control retained by many entities positioned in the middle of the supply chain, it may be practical to focus the middle entities' innovation and development efforts on the development of a technology platform, rather than the development of multiple unrelated products. The development of a technology platform allows the middle entity to minimize the burdens associated with new product offerings by not launching several truly 'distinct' products. This is especially true if the middle entity can obtain exclusivity for the technology platform, either through innovation or through an exclusive license. This improves the longevity of the product offerings and improves the effectiveness of branding efforts through focus and widespread customer exposure. Furthermore, this strategy ensures that the middle entity does not interfere with the market interests of its customers and suppliers.

Because middle entities often benefit from focus on the development of these technology platforms, it may be valuable to communicate these objectives to collaborating suppliers. If a supplier has a disjunctive focus from that of the middle entity, it may be worth considering a different supplier that may be able to more meaningfully contribute to achieving the objectives of the middle entity. Often times, if a supplier is aware of the middle entity's focus, the supplier can innovate for the particular application or need, or even suggest previous innovations that the supplier may have at its disposal which may provide the solutions that the middle entity is seeking.

To further its development of a particular technology platform, middle entities may consider licensing more patents to its customers than its competitors. Often times, licensing a patent to a competitor may undercut the value of the middle entity's technology platform. This can be caused by the fact that such competitor licensing may lead to competing technology platforms which are at odds with the development of a strong market presence. Middle entities which license core technology to customers may not experience such negative outcomes. This is due to the fact that customers of the middle entity often seek to produce derivatives of the technology platform, rather than competitors to the technology platform. In fact, licensing customers may actually lead to an expansion of the technology platform through increased market exposure.

2. Collaborate at Both Ends of Supply Chain

Although the 'middle' position of the middle entities leads to increased constraints, the middle position also leads to increased possibilities with respect to collaboration. Because the middle entity necessarily has supplier relationships at the front end and customer relationships at the back-end of the supply chain, the potential for increased collaboration often exists. This increased collaboration should be channeled and focused to minimize wasted resources.

This collaboration can be directed at the development of specialty products that represent the core competencies of the middle entity.²⁵ The front-end entity collaboration can lead to the

²⁵ *Smith* at 19.

provision of the newest types of materials, while the back-end collaboration can provide useful feedback on the newest type of applications which customers of the back-end entity desire.

In these collaborations, the middle entity should strive to obtain ownership of the patents, especially if those patents are directed to the core competencies of the middle entity. The outright ownership of the intellectual property rights can lead to tremendous value down the road if the patent becomes a basis for a major technology platform of the middle entity.

Alternatively, if outright ownership is not possible, the middle entity should seek to obtain an exclusive license on any technology developed in furtherance of the collaboration. This exclusivity is important for middle entities to prevent the front-end supplier from marketing the same technology to competitors of the middle entity. Although obtaining exclusivity for the entire term of the patent may be prohibitively expensive, it may be valuable to obtain the exclusive license for an initial period of time to allow development of a market presence and ownership rights to any secondary patents derived from improvements of the licensed technology.

Alternatively, middle entities may consider licensing their intellectual property rights exclusively to certain customers if it makes sense from a business perspective. Such exclusive licenses should not interfere with the middle entity's core technology platforms. Instead, such exclusive licenses may be considered when the back-end entity is seeking to market a product that is outside of the core competency of the middle entity.

3. Development of Non-Patent Intellectual Property

Middle entities should be diligent in developing "non-patent" intellectual property rights (i.e., trademarks, trade secrets and copyrights) in order to maintain their market position. While these non-patent rights play a role at all positions of the supply chain, this is especially important in order to protect market positions in downstream markets as consumer recognition of brands becomes more significant. For example, the goodwill and reputation embodied in a trademark can translate into increased sales and profits for entities in downstream positions in the supply chain. Depending on the technology being developed and marketed, it may be especially important for middle entities to be meticulous about protecting trade secrets as technology alternatives may be readily available for competitors to adopt.

Moreover, because exclusivity may not be enough to ensure a strong market presence for entities located in the middle of the supply chain, middle entities should be vigilant about protecting trade secrets. Often, trade secrets are generated by middle entities in the supply chain and represent a significant amount of value to the middle entity. To maintain its trade secret rights, middle entities must adopt strict confidentiality requirements at all stages of collaboration to prevent inadvertent disclosure and forfeiture of the trade secret protection. The middle entity should ensure that few people have knowledge of each and every aspect of the process. The middle entity should provide education to employees regarding what a trade secret is and how they can play a role in protecting the entity's trade secrets. Furthermore, middle entities should consider periodic trade secret audits to ensure that employee behavior is not jeopardizing the protection of the entity's trade secrets.

Beyond trade secrets, as noted above, trademarks including tradenames, and even domain names can provide significant value to entities located in the middle of the supply chain. Trademarks, trade dress, and domain names are three of the key methodologies that companies use to protect the goodwill developed over years of participating in the marketplace. Counterfeiting of trademarked goods may quickly dilute the marketplace for easily replicable technology. Similarly, cybersquatting may prevent a strong foothold as the middle entity seeks to expand its market presence in foreign jurisdictions.

As middle entities collaborate with entities located at other positions along the supply chain, they should ensure that these non-patent intellectual property resources are protected and considered as they enter into collaborative agreements.

C. Back-End of the Supply Chain

The back end of the supply chain is where the products from the front and middle of the chain are incorporated into a final product and delivered to the consumer. Manufacturers located at the back end of the supply chain have a direct connection to both the consumer and middle of the supply chain, and an indirect connection to the front-end of the supply chain. This wide exposure provides the opportunity for many sources of innovation. Partners, suppliers, inventors, and consumers can work with the company in improving existing products or developing new products.

1. Crowd Sourcing

Allowing consumers to take part in the innovation process has the potential to lead to an increase in the number of ideas, the speed to market of these ideas, and brand loyalty. When it comes to consumer innovation, the advantage of crowd sourcing for ideas is two-fold: (1) a clearer window into the consumer's needs and desires; and (2) a larger, wider pool of ideas.²⁶ A manufacturing company may take advantage of this opportunity through facilitating consumer brainstorming, exploring, and sharing of ideas and providing incentives and rewards. For example, Clorox provides an opportunity for inventors and consumers to share ideas through its Cloroxconnects.com website.²⁷

For those entities seeking to involve outside innovation sources, particularly consumers who may not have significant knowledge about intellectual property rights, it is important to be forthright in describing the role of the outside innovator. First, the entity seeking innovation must make it clear that the entity will retain the rights generated through any innovation. Second, the entity should set forth guidelines, and adhere to them, in order to ensure the outside innovator has a reasonable expectation towards compensation. By being upfront and forthright regarding the role of the outside innovator, subsequent problems are minimized.

2. Suppliers and Joint Venture

Back-end entities may consider involving middle and front-end entities in the innovation process to cut concept-to-market development time, improve quality, and reduce the cost of new

²⁶Henry Chesbrough, Wim Vanhaverbeke, & Joel West, *Open Innovation: Researching for a New Paradigm* 1 (2008).

²⁷CloroxConnects, Clorox Company (Jan. 25, 2012), cloroxconnects.com.

products.²⁸ To more effectively facilitate the inclusion of suppliers in product innovation, as noted above, joint development agreements or a joint venture may provide the appropriate legal framework. When pursuing joint innovation with suppliers, it is important to clearly delineate currently existing intellectual property rights and to enter into license agreements if necessary.

A typical joint development agreement has two main components: (1) the technical plan; and (2) the allocation of foregoing intellectual property rights.²⁹ The technical plan includes, for example, the specific tasks each company will accomplish as well as the resources it will provide. When negotiating the allocation of IP rights, both the right-to-use existing IP as well as the ownership of foregoing IP should be considered.³⁰

The joint development agreements between a manufacturer and supplier must detail how the improvement technology inventions created by the joint venture are made available to parent companies. The joint development agreements should also have an extensive definition of how ownership rights in and to the resulting intellectual property will be handled. A cooperation/development supply agreement may also be entered into.

A real-world example of a joint venture between a producer and a supplier is that of GLAD™ and Procter & Gamble (P&G). P&G was both a supplier and competitor for Clorox for many years. When Clorox prepared to launch an improved GLAD branded product, Clorox realized that the product overlapped with a technology that P&G had previously patented for other product areas. After first attempting to design around P&G's technology, Clorox abandoned the attempt due to cost reasons and approached P&G with the idea of in-licensing the technology. The companies decided to create a joint venture where P&G and Clorox contributed patents, trade secrets, and trademarks. This joint venture has been in existence for ten years.

3. Branding Strategies

Branding is the essential strategy for protecting entities market position and intellectual property rights at the back end of the supply chain. The value of a brand is derived from consumers' recognition of and loyalty to that brand. The "Brand to Expand" idea uses trademark protection in conjunction with patents to prevent competitors from entering profitable products into the market. Under this scheme, the manufacturing company patents a new technology to create an exclusive space in the market and then attaches a new brand name to attract consumers' attention. The old brand name is also attached to the product initially in order to secure the consumers' trust in the new product.

An example of "Brand to Expand" is CLOROX brand products marketed under the GREENWORKS™. Noting high consumer interest in the green products market, Clorox patented a new cleaning composition made with natural products to which it attached the new brand name GREENWORKS. In order to help consumers make the initial purchase, the strong brand CLOROX was also attached to the product.

²⁸Peterson, et al., *Supplier Integration Into New Product Development: Coordinating Product, Process, and Supply Chain Design*, 23 J. Op. Mgt. 371 (2005).

²⁹ *Mehlman* at 55.

³⁰ *Id.*

4. Manufacturer-Distributor Trademark Disputes

A manufacturer of the final product at the back end of the supply chain must also ensure its rights to its trademark are protected against wrongful distribution of its goods and services and uses of its name and slogans. Because both manufacturer and distributor contribute to the source identity of products and services, disputes over the trademark rights are common place.³¹ In such instances, in determining the ownership of a mark, courts are first instructed to look on an agreement between the parties. However, the agreement is not dispositive. Ownership of trademark rights depends on who the consumer perceives to be the owner of the mark.³² In the absence of an agreement, there is a rebuttable presumption that the manufacturer owns the mark.³³ In rebutting this presumption, several factors may be considered including (1) federal registration of the mark; (2) which party invented the mark; (3) which party first affixed the mark to the product; (4) which party maintained the quality and uniformity of the product; (5) which party the public identified with the product; (6) which party was responsible for advertising and promoting the product; (7) which party possesses the goodwill associated with the product; and (8) which company paid for advertising.³⁴

Based on these considerations, a manufacturer at the back-end of the supply chain should enter into an unambiguous written agreement with its distributors to safeguard its ownership of the trademark and to avoid loss of rights in the trademark. This agreement must include detailed instructions on the scope and use of the trademark and provide for quality control provisions. The owner of a trademark must monitor the uses of the trademark in order to maintain the strength and scope of its rights in the trademark.

IV. Conclusion

Harnessing the collaborative potential of supply chain production provides an opportunity for each entity to gain and maintain a competitive advantage. When participating in collaborations with other entities within the supply chain or consumers, each entity must consider how to safeguard its own intellectual property rights and those generated by the collaboration. The protection strategy employed will typically differ based on where along the supply chain the entity is located.

Front-end entities, most often suppliers of materials incorporated or converted into final products for the end user, are typically concerned with protection of its technology as it travels through the supply chain. The protections are often safeguarded in the form of written agreements with middle and back-end entities, the level of which depends on the amount of collaboration with the other entity or entities. Examples of such written agreements include non-disclosure agreements to protect confidential information, pre-emptive patent filings to protect

³¹ Chestek, *Who Owns the Mark? A Single Framework for Resolving Trademark Ownership Disputes*, 96 INTA 681 (2006).

³² *Id.*

³³ *Id.*

³⁴ *Id.* (citing *Sengoku Works Ltd. v. RMC Int'l Ltd.*, 96 F.3d 1217 (9th Cir. 1996); Garner, B., et al., *IP: Trademark Disputes as an Unintended Consequence of Distribution Agreements*, Inside Counsel, (Jan. 25, 2012), www.insidecounsel.com/2012/04/24/ip-trademark-disputes-as-an-unintended-consequence.

investments in innovations previously made, sampling agreements to address which entity will own the end use of sampled material, and joint development agreements that specifically define the responsibilities and rights of each entity participating in the collaboration.

Entities located in the middle of the supply chain have the opportunity to collaborate up and down the supply chain. While providing the opportunity for greater innovation, this may also present challenges in the form of constraints coming from both sides. These entities may find it useful to create exclusivity for a particular technology platform through patent protection and then licensing this patented technology to other entities in the chain if necessary. It is particularly important for entities located at the middle of the supply chain to seek exclusive licenses or rights in and to technologies developed during the course of the collaboration. It is also important to protect valuable trade secrets and identifiers of source and slogans as trademarks.

Entities at the back end of the supply chain enjoy many opportunities for collaboration due to its interface with both the upstream supply chain entities and the consumer population. Back-end entities may harness this opportunity by entering into joint development agreements and joint ventures, and providing incentives for consumers and individual inventors to submit ideas. The strength of a back-end entity's trademark may be capitalized on in order to expand into new markets with new technologies.

Acknowledgements

This paper was prepared in connection with the 2013 AIPLA Mid-Winter Institute held in Tampa Florida and on behalf of the panel discussion of the same title, *Aligning IP Strategies with Business Objectives Up and Down the Supply Chain*.

The authors would like to thank each of the panelists including: Pat Bengtsson, Vice President & Associate General Counsel of The Clorox Company; Valerie Calloway, Chief Intellectual Property Counsel for Polymer Group, Inc.; Nancy Klembus, Assistant General Counsel; and Richard F. Phillips, Chief Intellectual Property Counsel, ExxonMobil Chemical, for sharing his/her knowledge of the subject matter and insightfulness.