How to Develop a Successful IP Strategy for AI

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Questions to help you leverage your competitive advantage and mitigate risks

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Companies implementing artificial intelligence technology often face unique intellectual prop-erty issues. There are distinct challenges to de-vising a strategic and cost-effective IP plan for AI.

Determining risk tolerance when developing strate-gies to protect one's own investment in AI and navigat-ing third-party IP rights may not be straightforward. So, what questions should companies be asking as they implement AI? Here are some initial considerations to spark embedding IP awareness within your enterprise.

Branding and Clearing Your AI

If you are at the drawing board, keep in mind that some trademarks are inherently stronger than others. Coined words and words that have no connection to AI will be inherently stronger. Words that are common and de-scriptive of AI are likely to be more challenging and expensive to clear and protect. The word "smart," for example, is arguably now synonymous with "artificial intelligence." This has resulted in numerous "smart" AI marks. If you are considering a "smart" mark, your mark, as a whole, must be both distinctive and regis-trable. Your mark will need to peacefully coexist with more than 1,500 other "smart" marks on the Register. Your "smart" mark also should not clearly describe your AI, nor should it mislead consumers.

Another trend, often with virtual digital assistants, is literally *name* brands, such as Amazon's ALEXA, Apple's SIRI and Hanson's SOPHIA marks. This presents inter-esting challenges since you generally want to avoid using your marks as nouns. If you do "name" your AI, it will be important to ensure that the name presents as a trade-mark and remains distinctive. For example, use a TM sym-bol and legend and set the name apart from surrounding text. There can be registrability issues with names (more so with full names and surnames than given names). For trademark clearance purposes, if you are committed to naming your AI, try to pick a name that has another meaning or coins a name (SIRI is said to be an acronym for "Speech Interpretation and Recognition Interface").

Finally, turn your mind to domain names. Don't despair if your .com is not available because there are specific domains that are being marketed for the AI in-dustry, including .ai and .io. There are other options to consider, too (i.e. .app, .tech, .digital). Whatever the mark you are considering, have your counsel conduct a search to confirm the mark is available for use and registration in the jurisdictions of interest.

Do you need to clear your AI inputs? Do you lose protection for AI outputs?

Clearing AI inputs may feel like walking through a minefield. There are several considerations. Are the in-puts protected by copyright and are you infringing by text and data mining — or TDM? Most text mining will involve a copyright-protected work. Data mining is more difficult, and the focus will often be on whether there is an "original" database and whether the data mined is a substantial part. Do you have a "user right" to text and data mine? In Canada, while there is currently no spe-cific exception for TDM, TDM activities *may* be permit-ted for research purposes and commercial research *may* qualify. Did you circumvent a technological protection measure to access or copy the inputs?

Are you violating terms of use, a confidentiality or other agreement? IP protections are often shored up by using TPMs (e.g. digital locks and encryption), and many companies rely on contractual restrictions and/or keep data confidential, too. If your inputs include personal information, are you complying with privacy laws? An-swering "maybe" to any of the above questions raises a clearance issue for the inputs and your text and data min-ing activities, and it is advisable to confer with

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counsel.

Another interesting question is whether works created using AI lose IP protection. AI is often used to "create" and, often, the output is presumed to be protected by copyright. Sometimes, AI is a "tool" and, sometimes, it's a "medium" for human creation. Other times, AI may appear to be creating autonomously. AI involved in the creation process can raise interesting questions as to whether or not copy-right subsists in the resulting work. Does AI displace human authorship? Are works created using AI "origi-nal" (in the legal sense)? In Canada, the prudent course would be to ensure there is some element of human au-thorship before a work created using AI is published or otherwise disseminated.

What Kind of AI Can Be Protected by Patents?

Patents protect the functionality of inventions that are new, non-obvious, useful and which consist of patent-eligible subject matter. Patents are used to strategically achieve or maintain a position in the marketplace, increase share value and/or secure investment. Many companies are unsure what aspects of their AI may be patentable and how best to navigate third-party patent rights. The an-swer depends on the kind of AI technology at issue.

Over the past 10 years, the U.S. Patent Office has been issuing patents in ever-increasing numbers for fundamental AI technology based on the specific tech-nical details of machine learning functionality. This kind of AI has been long satisfying the evolving patent-able eligibility subject matter test for software invention in the U.S. for the reason that the fundamental AI has been considered to be "sufficiently technical."

In January, the U.S. Patent Office issued revised guidelines that indicate as long as an abstract idea is "integrated into a practical application" it will be patent eligible. Embedded AI incorporates fundamental AI into conventional products and typically includes a variety of hardware elements. Showcasing the technical details and practical application of an embedded AI invention can improve chances of patentability under the traditional "sufficiently technical" and more recent "integrated into a practical application" patent eligibility tests.

Expert systems are a third kind of AI generally used to mine large volumes of data to generate a useful nu-merical result (e.g. stock price). This kind of AI is gen-erally harder to protect by patent due to its largely ab-stract nature. One strategy for expert system inventions is to describe the system and provide technical details on any "feedback control" aspects.

Finally, AI is being harnessed to design and create new physical products, such as calculating the shape of a bicycle that has the most aerodynamic shape through shape optimization applied to user-defined specifica-tions. While the general rules of patentability apply to these AI-created physical products, there are open questions around inventorship and ownership that will need to be considered in the context of evolving patent legislation in various jurisdictions.

IP in AI can be your competitive advantage. By ask-ing questions like those above, IP awareness will be embedded from strategic plainning to product develop-ment to monetization.

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