

AI and Deep Learning

Practices and Industries

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Haynes Boone has been active in the artificial intelligence (AI) space [for more than 30 years](#). Today AI continues its rapid growth and profound impact on the world, transforming industry after industry. As AI grows, so does the need for intellectual property and regulatory protection in the AI space. According to a recent World Intellectual Property Organization (WIPO) report, [Technology Trends 2019: Artificial Intelligence](#), nearly 340,000 patent families and more than 1.6 million scientific papers related to artificial intelligence were published from 1960 until early 2018, and the number of patent applications filed annually in the AI field grew by a factor of 6.5 between 2011 and 2017.

Applicants for AI patents face unique challenges. Who can be listed as an inventor if AI creates or contributes to an invention? Are AI inventions susceptible to the subject matter eligibility challenges? Who can be a person of ordinary skill in the art be when determining obviousness of the AI inventions?

Haynes Boone's multidisciplinary AI group brings together the technical knowledge and industry experience to effectively advise clients operating in this rapidly evolving space. The AI group helps companies and individuals safeguard their core products and methodologies. Our experience covers all aspects of AI, machine learning, and deep learning technologies, including:

- Developing domestic and international patent portfolios related to AI applications in **autonomous driving, machine learning, natural language processing, industrial automation, and anomaly detection in utility and *ad hoc* wireless networks**.
- Representing clients in **post-grant proceedings** covering locating technologies that rely on **neural networks**.
- Drafting patents for **autonomous control of robotic operations** in energy distribution systems.
- Developing a global patent portfolio on deep learning research and engineering for customer relationship management (CRM) platform including **natural language processing (NLP), commonsense reasoning, and computer vision**.
- Developing robotic-assisted surgical system patent strategy and protection.

We assist AI-focused clients with:

- Drafting durable domestic and international patents with a deep understanding of the unique challenges faced by AI patent applications.
- Advising on successfully overcoming subject-matter eligibility and obviousness challenges in the context of patenting AI technologies.
- Challenging and defending patents in post-grant patent proceedings before the USPTO, including covered business method and *inter partes* reviews (IPR), and in state and federal courts.
- Providing due diligence in the context of mergers and acquisitions ranging from a few million to over a billion dollars.
- Brand protection, including trademark portfolio development, social media and privacy policies, and enforcing brand and domain rights in litigation and administrative proceedings.
- Providing strategic guidance on domestic and international patent portfolio development and management, including the creation and use of patent landscapes to guide research and development.
- Rendering product clearance opinions regarding competitors' intellectual property rights and guiding product design initiatives to better position the company against third-party risk.

In 2022, 15 Haynes Boone lawyers were recognized in [Intellectual Asset Management \(IAM\) Patent 1000 Directory](#), which spotlights firms and individuals deemed by peers and clients as outstanding in the patent practice. Our firm ranks among the nation's top firms in [Patexia's 2022 IPR Intelligence Report](#). Haynes Boone is a **top 10 law** firm filing IPRs on behalf of the Petitioner, with an institution rate of **83%** and a final decision rate of **80%** for canceling claims. The average institution and final decision rates are 78% and 69%, respectively (Lex Machina, 2023).