

# Protecting Your Inventions on Autonomous Vehicles

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**PRACTICES** Intellectual Property, Patent Litigation, Trade Secret Litigation, Corporate, AI and Deep Learning, Autonomous Transportation, Emerging Companies and Venture Capital

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Autonomous vehicles involve an integrated convolution of sensor technology, navigational technology, computing (Artificial Intelligence), power systems, hydraulics, and mechanical manipulators to provide for a vehicle that operates to perform specific tasks substantially without operator intervention. As an example, a farm implement may include specialized sensors, task specific navigation, and task specific machinery. Many technological advancements involving this convolution can be protected either with trade secrets or with patent protection. Inventions directed to vehicles can be directed to individual sensors, individual specialized systems, power management, and to the integration of the components to form the automated final product.

Protecting an invention as a trade secret can be valuable for inventions that cannot be determined from a third party by an inspection of the final product (e.g., inventions that cannot be reverse engineered). Trade secret protection is valid for the time that the invention is actually kept a secret. If the invention is acquired by a third party through valid means (e.g., not through intentional theft of the trade secret), it is not protected. Further, sufficient steps must be taken to protect the secret to guard against theft.

One area where protection by trade secret can be used is with data. An AI used in operating the vehicle is trained with a data set so that data that is input to the AI results in expected control parameters to the vehicle. This data set is often painstakingly acquired over time as sensor inputs result in appropriate control system outputs. The AI is then expected to operate efficiently and safely to sensor inputs. Protection of these data sets can be difficult as they do not lend themselves easily to patent protection. Often, data sets that are acquired to train the AI are protected by contractual arrangements or by trade secret protection.

Patent protection for inventions is preferred to protect most technological advancements. Patent protection provides for a right to exclude others from practicing the invention specifically claimed in the patent for the term of the patent. To obtain a patent in a particular jurisdiction, the invention being claimed must be fully disclosed in a document, directed to patentable subject matter, and be novel and non-obvious over publicly available disclosures. A granted patent, which often results from correspondence with the patent office to amend the claims, is presumed valid and can be challenged at any time. Based on US patent filings, patent protection can be sought in over 140 countries around the world. It is worth noting that patent protection is only provided in countries where a patent has been granted. Consequently, care should be taken with regard to where to file for patent protection.

Inventions resulting from the technological advances made in autonomous vehicles can and should be protected. Consult your Intellectual Property professional to determine the best way of protecting these advances.