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# WHOSE INVENTION IS IT? THE MISSING PATENT LAW FOR ARTIFICIAL INTELLIGENCE IN INDIA'S DEFENCE RESEARCH

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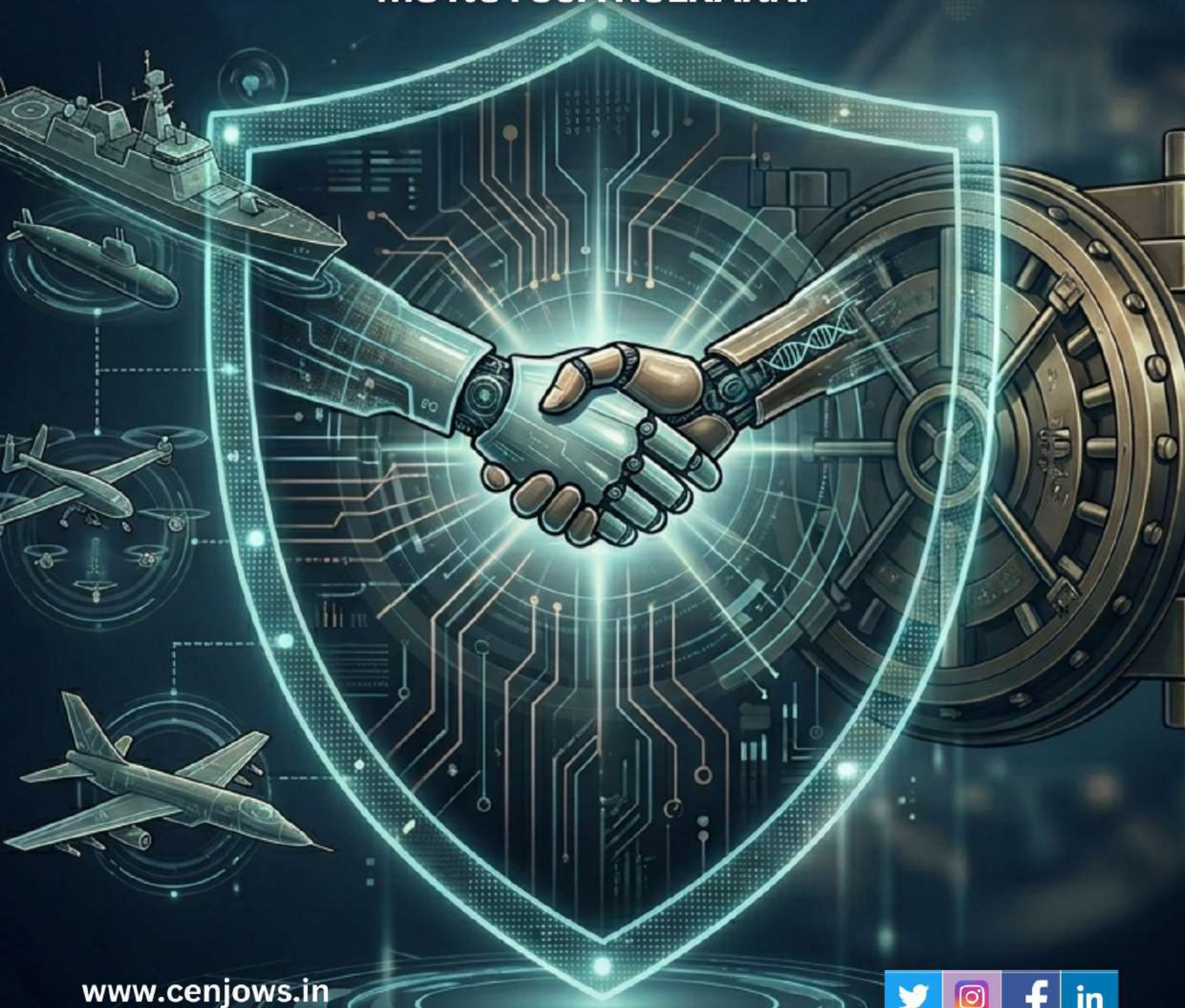

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# Whose Invention Is It? The Missing Patent Law for Artificial Intelligence in India's Defence Research

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**ABSTRACT**

India's defence research sector has integrated artificial intelligence into some of its most critical operating systems, however the legal framework governing the intellectual property arising from these is yet to keep pace. India's Patent Act 1970, which governs inventorship, was made for the world of human inventors and offers no answer to the question: When an AI system generates a defence innovation, who owns it? This article argues that India urgently needs a dedicated legal framework for patents arising from AI-assisted and AI-generated inventions in the defence sector, one that also clearly defines the role and rights of private sector partners, whose participation has become essential to India's defence innovation ecosystem. Without this framework, strategic technologies risk remaining legally unprotected, disputes between public and private claimants may arise, or vulnerable to foreign assertion.

## INTRODUCTION

In the last few years, the *Defence Research and Development Organisation (*DRDO) has built Artificial Intelligence into some of its most critical systems. The Trigun system uses AI to track enemy submarines and warships in real time. The Indian Maritime Situational Awareness System watches the entire ocean and sends a live operational picture to every Indian Navy ship at sea. The Integrated Drone Detection and Interdiction System use machine learning to differentiate between real drone threats and decoys. In July 2022, the Ministry of Defence launched seventy-five AI-enabled defence products developed across DRDO, Defence Public Sector Undertakings, and private industry.[1]

However, a few legal gaps remain. When an AI system helps design a new targeting algorithm, a better missile guidance method, or a smarter surveillance tool, the question arises as to who owns the invention? Who files the patent? Is it DRDO or the private setup that built the AI tool? The scientist who supervises the process, or is it to be simply left unprotected because the law does not have an answer, yet?

These questions have a direct impact on India's national security and on the hundreds of start-ups now investing in defence AI through programmes like Innovations for Defence Excellence, better known as iDEX.

## THE LEGAL PROBLEM

India's Patents Act 1970 was written in a time when inventions came from human hands and human minds. Section 6 of the Act says that only a person can apply for a patent. Then, section 2 (1) (p) says the inventor must be the one who originated the idea.[2] AI is neither a person nor an originator in the legal sense. The Indian Patent Office has already rejected an AI- generated patent application known globally, for the Device for the Autonomous Bootstrapping of Unified Sentience (DABUS) Case on exactly these grounds.[3]

The rejection revealed far more serious issues, that if human involvement was only supervisory directing the AI, reviewing its output, there may be no valid inventor at all under Indian law. No inventor means no patent. No patent means the technology sits unprotected. In a commercial sector, this is a business problem. In the defence sector,

it is a security problem.

Another layer of difficulty is added by Section 3(k). It excludes mathematical methods, computer programmes, and algorithms from patentability.[4] In September 2024, the Madras High Court's decision in Idemia v. Controller General of Patents significantly challenged the traditional interpretation of Section 3(k), making it clear that inventions which demonstrate a genuine technical effect can pass through, but this judgement focused on commercial technology, not defence technology.[5] This interface has received no legal attention in India.

In March 2025, the Indian Patent Office released its Draft Computer-Related Inventions Guidelines, 2025.[6] For the first time, the guidelines explicitly discuss AI and machine learning models. They confirm that inventions demonstrating a concrete technical effect are not blocked merely because software is involved; they still need a human inventor. A defence start-up using AI to generate a novel electronic warfare solution has no clear path forward under these guidelines and thus does not help the defence sector.

Raghavender and Singh, writing in the Journal of Intellectual Property Rights, have noted that no framework exists in India for resolving inventorship where AI has materially contributed to an invention.[7] Barooah raised the same concern as early as 2019.[8] It is now 2025, India is deploying AI in operational military systems, and nothing has moved.

## GLOBAL PICTURE

This problem can be seen in various jurisdictions across the globe. In February 2024, the United States Patent and Trademark Office issued its inventorship Guidance for AI-assisted Inventions, establishing that human beings who make a 'significant contribution' to the idea of invention, and even one substantially produced by AI, can qualify as inventors.[9] Eight months later, in November 2025, the United States Patent and Trademark Office (USTPO) revised this guidance further, clarifying that AI systems should be treated like 'laboratory equipment or research databases', tools used by human inventors, not inventors themselves. [10]The US is actively refining it framework in real time, with clear documentation requirements for how the human inventor directed, selected, and refined the AI's output.

The United Kingdom's Supreme Court definitively rejected AI inventorship in the DABUS case while leaving space for the development of a doctrine around AI-assisted contributions.[11] The European Union's AI Act of 2024 has begun legislative reform, and the European Patent Office has updated its examination guidelines to handle AI-assisted inventions systematically.

China is the most instructive comparison. Shimona Mohan, writing on India's defence AI position in The Very Long Game, the most comprehensive comparative study of defence AI across twenty-five nations published to date, describes India as a country of 'passive ambitions and active limitations.'[12] China, by contrast, has moved with purpose. Chinese defence universities and state firms, including the National University of Defence Technology and Norinco, actively file patents for AI-enabled military systems.[13] In 2024, China accounted for approximately 61 to 70 per cent of global AI patents granted.[14] Human researchers are formally named as inventors even where AI generated the core output, and the ownership question does not arise because all defence research assets vest in the State by default.

The contrast is stark. While in India, the Patent Amendment Rules, 2024 streamlined examination timelines that helped reduce the window for requesting examination from 48 months to 31 months; however, they addressed procedural delays, and not the substantive question of who can be an inventor when AI is involved.[15]

## THE ROOM FOR THE PRIVATE SECTOR

India has deliberately and successfully opened defence innovation to private start-ups, and that is a good thing, but it has created a layered ownership problem. The Innovations for Defence Excellence (iDEX) scheme, launched in 2018 under the Defence Innovation Organisation was designed to change the relationship between defence and private innovation. As Cherian Samuel noted in his analysis of iDEX, the defence sector is largely a monopsony, largely impenetrable even to established business houses and the iDEX model was specifically built to open that door, matching startups with problem statements from the armed forces and funding prototype development.[16] The results speak for themselves: by February 2025, iDEX had engaged 619 start-ups and Micro, Small, and Medium Enterprises (MSMEs), issued 549 problem statements, and awarded 430 contracts. The armed forces have procured items worth over Rs 2,400 crore from iDEX innovators.[17]

The Acing Development of Innovative Technologies ADITI scheme, launched in March 2024 with a corpus of Rs 750 crore, goes further. It specifically targets deep-tech areas, including AI, Autonomous systems, quantum technologies, and underwater surveillance, with grants of up to Rs 25 Crore per project.[18] The government has also raised the FDI ceiling in defence to 74% under the automatic route, and upto 100% with government approval.[19]

However, if the foreign investors hold the majority stake and the start-up's AI System did the generative work, the question again arises who holds the algorithm? Swarajya Magazine's analysis of the Draft Defence Acquisition Procedure 2026 observed exactly this risk, that where foreign Original Equipment Manufacturers or foreign-invested firms are involved in developing Indian defence technology, the absence of clear IP protections means India could lose legal claim to innovations it funded and directed.[20] Draft Defence Acquisition Procedure, DAP-2026, has tried to address this by requiring that Intellectual Property (IP) rest with Indian entities, but it says nothing about who owns AI-generated Intellectual Property when the AI tool itself was built by a foreign-invested company.

Samuel also noted that one of the features built into the original iDEX was that intellectual property rests with the start-ups, though the government may restrict its transfer on grounds of national security.[21] This is a workable arrangement between hardware and software built by humans.

**WHAT THE PRIVATE SECTORS NEED**

The private sector's role in India's defence ecosystem is one of the country's most important recent achievements. Companies like Tata Advanced Systems, Bharat Forge and Larsen and Tourbo, alongside hundreds of smaller iDEX start-ups, are contributing real capability. They are doing so because they expect to own and benefit from what they create.

Samuel points out that one of the persistent challenges for iDEX start-ups is obtaining funding, since venture capital has not traditionally looked upon the defence sector favourably. [22]An article in Swarajya Magazine noted that start-ups face a 'valley of death' between prototype success and actual procurement orders, the very problem iDEX was designed to solve.[23] If, on top of this, AI-generated inventions fall into a legal

grey zone with no clear owner and no enforceable patent, that valley deepens further. A start-up that spends two years building an AI-based defence capability, only to find that the core invention cannot be legally protected, will not invest in the next one. The ecosystem that India has built through iDEX and ADITI depends on the expectation of legal return. Without a patent framework that covers AI-generated inventions explicitly, that expectation has no foundation.

## WHAT INDIA MUST DO

Firstly, there needs to be an amendment to formally distinguish between AI-assisted inventions, where a human being made substantive creative contributions, and AI-generated inventions, where the AI produces the core output autonomously. The 2025 USPTO guidelines, which treat AI as a tool rather than a co-inventor and focus on human conception, provide a workable model that India can adapt.[24] AI-assisted inventions should qualify for patent protection under an amended definition of inventorship. India's 2025 Draft CRI Guidelines have moved in this direction for commercial inventions.

Second, a statutory ownership hierarchy must be established for defence R&D involving AI. The DAP 2026 has tried to address this through procurement rules, but procurement rules are not patent law. Ownership established by a procurement procedure that can be challenged in court.

Third, the government should ensure that AI-generated technologies developed with Indian public funds are domestically owned by default, regardless of the nationality of the AI tool used. Given that 74% FDI is now permitted in defence, and that AI systems used in DRDO start-up collaborations may run on models developed abroad, this safeguard is essential and also to meaningfully contribute to Aatmanirbhar Bharat.

## CONCLUSION

India has made genuine and commendable progress in defence AI. However, technological capability without legal ownership is fragile in ways that matter for a country's long-term strategic position.

If a defence technology cannot be patented, it cannot be transferred cleanly to allied services or licensed. If an adversary copies it, India has no legal standing to say it was

stolen. Mohan's description of India's defence AI position as one of 'passive ambitions and active limitations' captures the situation precisely.[25] The limitation examined in this article is not technological. It is legal and fixable, however, only if addressed before a gap becomes a liability. A dedicated patent framework for AI-generated inventions in the defence sector, one that clearly defines the rights of both state institutions and private partners, is an immediate requirement. India should treat it as one.

## DISCLAIMER

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