
Reimagining Patent Eligibility in the AI Era: A Critical Look at India's 2025 Draft CRI Guidelines

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Abstract

A significant change in India's approach to cutting-edge technologies like blockchain, quantum computing, and artificial intelligence (AI) can be seen in the 2025 Draft Guidelines for Examination of Computer-Related Inventions (CRIs). By formally introducing tests for technical effect and contribution, these guidelines seek to clarify the review of patent applications under Section 3(k) of the Patents Act. In order to guarantee that only genuinely inventive, technically sound inventions are protected, they place a strong emphasis on comprehensive disclosure requirements for AI models, blockchain systems, and other disruptive technologies. There are still some unclear areas, particularly with regard to "per se" exclusions, sufficiency thresholds, and quantum-specific treatment, even though the draft takes a more progressive approach and is consistent with international jurisprudence. In order to improve clarity, consistency, and innovation-readiness, this research critically evaluates the new provisions, compares them to earlier frameworks, and makes legal recommendations. For legal professionals navigating the changing IP landscape in India's tech-driven and digital economy, it is a must-read.

Introduction

India's technological landscape has changed dramatically over the past ten years. The lines separating what qualifies as a patentable invention have become increasingly hazy as fields like artificial intelligence (AI), blockchain, and quantum computing have transformed from specialized research fields into popular innovation hubs. But India's patent system has frequently found it difficult to keep up with these developments, especially with regard to **Section 3(k) of the Patents Act, 1970**, which forbids "computer programs per se."

The Indian Patent Office has published the **2025 Draft Guidelines for the Examination of Computer-Related Inventions (CRIs)** in an effort to close this growing disparity. In assessing patent applications involving software-driven and algorithm-intensive innovations, this draft seeks to offer uniformity and clarity. It aims to strike a balance between statutory exclusions and innovation incentives while also responding to recent jurisprudence.

This research critically examines how the draft guidelines treat AI, blockchain, and quantum inventions—what has changed, what remains unclear, and what more is needed to align India's patent framework with the demands of a tech-centric future.

Keywords

- 2025 CRI Guidelines
- Computer Related Inventions
- AI patents India
- Blockchain patents
- Quantum computing patents
- Section 3(k)
- Software patentability
- Technical effect test
- Patent disclosure requirements
- Indian Patent Law

- Intellectual Property India
- CRI patent examination
- AI innovation law
- Blockchain IP
- Quantum tech IP
- Draft CRI 2025
- Patent guidelines India
- CRI software exclusion
- Patentability criteria
- Emerging tech patents

Rapid Technological Change and Regulatory Gaps

Patent law is struggling to keep up with the rapid advancements in artificial intelligence, blockchain, and quantum computing. Section 3(k) of the Patents Act,¹ which bars "computer programs per se" from patentability, clashed with this expansion in India. That void is intended to be filled by **the Indian Patent Office's 2025 draft Guidelines for Examination of Computer-Related Inventions (CRIs)**. The new draft specifically acknowledges the need for more precise regulations in cutting-edge domains like artificial intelligence, blockchain, and even quantum computing. Its purported objective is to weed out purely abstract concepts while guaranteeing that software-based innovations that address technical issues qualify for patent protection.

Key Provisions of the 2025 CRI Draft Guidelines

"Per se" and Section 3(k). The draft restates, as in previous guidance, that a software program by itself is still not patentable under Section 3(k). "Per se" is carefully redefined in the guidelines as "considered alone and not with other things." To put it another way, a program by itself is not eligible for patent protection, but an invention that uses software might be if it provides a tangible technical benefit. According to the guidelines, for instance, an algorithm that is implemented in code is not patentable in and of itself; however, the invention as a whole may be protected if the algorithm's output has a technical effect (such as enhancing hardware

¹ The Patents Act, 1970, § 3(K) (India).

operation). This is consistent with recent case law (e.g. Ferid Allaini) that holds that even code-based inventions that demonstrate a technical contribution to the real world can be patented.² Examiners are specifically cautioned in the draft to differentiate between a technical solution and an abstract algorithm (copyright-only). It even includes a new example list of CRI claims that are patentable versus non-patentable, which was completely missing from the 2017 guidelines.

Extended Definition of "Algorithm" The term "algorithm" is expanded upon in the draft for the first time. It emphasizes that creating an algorithm is only an intellectual exercise covered by copyright, not a patentable invention, and defines an algorithm as "a set of rules or instructions for solving a problem," citing a Madras High Court ruling. To put it briefly, the guidelines make it clear that algorithms are still not patentable. However, if the innovation in a computer program is in the way the algorithm generates a practical technical effect, the program may still be patented.

Test of Technical Effect/Contribution. The formal adoption of a "technical effect" or "technical contribution" requirement is a key component of the draft. This is consistent with court decisions: a software-based invention should be eligible if it can be shown to solve a technical problem, but not if it only follows business or mathematical reasoning. The draft outlines illustrative technical advantages to help examiners. Patentable inventions could, for instance, speed up processing, shorten memory access times, or enhance machine data compression. Stronger cybersecurity (e.g., novel encryption), improved real-time monitoring, improved signal transmission, improved control over robotic hardware, and more effective image or signal processing are some of the other effects mentioned. The guidelines indicate that inventions that achieve such practical gains should be considered to have a patentable technical contribution by listing these specific examples. (Notably, these are not a closed list; rather, the guidelines call them illustrative effects.)

Sufficiency and Disclosure Requirements. The draft's emphasis on thorough disclosure for blockchain, artificial intelligence, and other "disruptive" technologies is a novel aspect. The guidelines emphasize that AI patents must disclose important implementation details, in line

² Ferid Allani V. Union Of India, W.P.(C) 7/2014, Delhi HC (2019).

with a recent Madras High Court ruling (Caleb Suresh Motupalli)³. In order to "replicate the AI model's functionality," applicants must reveal, among other things, the sources and properties of any training data sets, data-preprocessing procedures, neural network or learning model architectures used, activation/convergence criteria, loss functions, etc. Similarly, blockchain innovations need to specify the precise cryptographic algorithms, data structures (block formats, linkages), consensus processes, and network setups used. Such thorough disclosures "enable others to fully understand, replicate, and assess" the purported innovation, according to the draft. In order for an experienced reader to implement the invention, even new machine-learning algorithms need to be thoroughly explained (network topology, metadata, etc.). To put it briefly, the guidelines seek transparency in fields that have historically been opaque by raising the bar for AI and blockchain patents.

Emerging technologies are acknowledged. The draft is notable because it specifically names blockchain, quantum computing, and artificial intelligence as areas of focus. It recognizes that the technical effect test must be met by inventions involving these fields. It states clearly, for instance, that AI-driven innovations "are now introduced as patentable, subject to demonstrating technical contribution." The disclosure rules mentioned above address blockchain, and the draft even references a US-style "business method" test (from OpenTV) to weed out business logic that isn't tied to technology. It's interesting to note that although quantum computing is included in the list of "emerging technologies," the draft provides no particular patent examples or tests for it. The same standards will probably apply to quantum claims: they must demonstrate a technical impact (e.g., a specific improvement in a quantum algorithm or hardware performance).

The guidelines' mention of "quantum computing" is largely illustrative of the landscape, and examiners will have to apply general CRI principles to quantum inventions.⁴

³ Caleb Suresh Motupalli V. Controller Of Patents, 2020 SCC Online Mad 16548.

⁴Office of the Controller General of Patents, Designs & Trade Marks, *Draft Guidelines for Examination of Computer Related Inventions (CRIs)* (Mar. 2025), https://ipindia.gov.in/writereaddata/Portal/Images/pdf/Draft_CRI_Guidelines_Publication_March2025.pdf.

What's New in 2025 Compared to Earlier Guidelines

A number of features not found in the 2017 CRI Guidelines are added in the 2025 draft. Based on recent case law, it revises important definitions such as **"per se," "algorithm," "firmware," "secure system," etc.** While previous guidance provided no context on copyright protection, the idea of a patentable algorithm is explicitly refuted. A six- or seven-step novelty analysis (from *Ericsson v. Lava*) is also incorporated into the new draft in order to methodically identify technical features and prior art.⁵ It makes reference to a business-method factor test for the first time, indicating that a technical contribution must still be made simply by using blockchain or artificial intelligence in a business setting.

Crucially, the draft offers examples of patent-eligible and ineligible claims for illustration purposes. For example, it provides model claim language for both successful (solving a particular technical problem) and unsuccessful inventions. Previously, there was no such specific guidance. According to one commentary, "The 2025 draft includes recent case laws and judgements to enhance clarity and explicitly defines the term 'technical effect/technical contribution.'" It even includes sample claims. To put it briefly, the new draft adds new terminology, current jurisprudence, detailed exam procedures, and technology-specific instructions to the 2017 framework, giving it a more detailed approach targeted at contemporary ICT innovations.⁶

Critical Analysis: Gaps and Ambiguities

Notwithstanding these developments, the 2025 draft raises a number of issues that remain unanswered and could present interpretive difficulties. First, although illustrative, the **"technical effect"** examples run the risk of being taken too literally. Examiners may ignore other innovations in favor of concentrating solely on the effects mentioned (speed, memory, etc.). Without specific caution, borderline cases (such as a novel AI inference optimization not mentioned above) could be rejected as having no "technical effect," even though the guidelines

⁵ *Telefonaktiebolaget LM Ericsson V. Lava Int'l (H.K.) Ltd.*, Delhi HC, 2016.

⁶ STA Law Firm, *Recent Developments in India's Corporate & Commercial Laws* (Feb. 3, 2025), <https://www.stalawfirm.com/en/blogs/view/recent-developments-in-indias-corporate-commercial-laws.html>.

state that these are illustrative. Examiners will need to use their discretion in practice, but the draft offers little guidance on what to do in cases where an effect is not listed.

There is still uncertainty in the "**per se**" definition. The phrase "**alone, not with other things**" makes it clear that software and hardware can be patented, but it can be difficult to apply in gray areas. What level of hardware interaction is sufficient? Many AI models, for instance, operate on conventional CPUs; is this "hardware interaction" or just implementation? Examiners and courts may interpret Section 3(k) differently because the guidelines do not establish a precise threshold.

The rules might be too burdensome on **sufficiency**. Demanding "**comprehensive descriptions**" of blockchain internals or AI models may stifle creativity or violate trade secrets. How to strike a balance between disclosure and secrecy is not addressed in the guidelines. A startup may not have the resources to thoroughly document an AI pipeline, or it may have good reason to keep some model details private. Examiners may unjustly reject legitimate inventions if they adamantly require every neural net node or every byte of training data. In order to prevent a strict sufficiency test from stifling innovation, commentators have actually called for examiners to be granted discretion in developing fields like artificial intelligence. This problem is avoided in the draft.

Furthermore, beyond name-checking, **quantum computing** is essentially unaddressed. The boundaries between novel hardware physics and software are frequently blurred by quantum algorithms. Practitioners will need to draw conclusions from the guidelines' lack of quantum-specific criteria or examples. This could raise questions about whether quantum inventions will be subject to the same "technical effect" criteria as hardware or Section 3(k) testing as classical software. A gap in an otherwise thorough draft is the lack of guidance.

Finally, it seems strange that a business method test (from OpenTV) was mentioned in passing. The guidelines' insistence on a three-factor test may cause confusion rather than clarification, as business methods are already unpatentable under Section 3(k). How examiners should use that test in addition to the general technical-contribution test is unclear. In summary, although

the draft includes much-needed detail, it also adds layers of complexity that may result in uneven review or legal action.⁷

Recommendations and Policy Suggestions

To strengthen the guidelines, we suggest the following improvements:

- **Emphasize Illustrative Nature of Examples.** Make it clear that the technical effects (speed, memory, security, etc.) mentioned are not all-inclusive. Its examples are illustrative, as the draft itself states. The examples wouldn't be viewed as a limiting checklist if there was a clear disclaimer or preamble alerting examiners that other technological developments qualify. IPO appreciates the Guidelines' presentation of various sample claims in the Examples. It suggests that each example be accompanied by an explanation regarding the eligibility of each sample claim. Stakeholders would benefit from the Indian Patent Office's view on the specific technical contributions and effects present or absent in each example. Doing so would align with the approach of other patent offices in providing examples and supporting reasoning.
- **Provide Quantum-Specific Guidance.** Describe how claims about quantum algorithms will be assessed, or provide at least one example involving a quantum computing invention. In order for practitioners to know what to say and how the "technical effect" applies in that field, this could entail bringing up quantum hardware (qubits, gates) or cryptographic algorithms specific to quantum technology. The guidelines themselves noted the rapidly expanding field of quantum, which is overlooked when it is not addressed in detail.
- **Calibrate AI/Blockchain Disclosure Requirements.** The guidelines ought to recognize that complete transparency in model architecture or AI training data may not always be possible. As long as the primary creative contribution (such as a novel neural network architecture) is adequately explained, they might permit applicants to reveal classes of data or high-level model features instead of raw datasets. Stated differently, demand meaningful enablement without requiring every technical detail.

⁷ Ishika Keswani, *Analysing the Draft CRI Guidelines, 2025: Navigating the Evolving Landscape of Computer-Related Inventions*, IP & Legal Filings (May 24, 2025), <https://www.ipandlegalfilings.com/analysing-the-draft-cri-guidelines-2025-navigating-the-evolving-landscape-of-computer-related-inventions/>.

- **Clarify “Per Se” Threshold.** At least one example illustrating when software is regarded as a component of a larger invention would be beneficial. Show how a patentable claim involving computer code that enhances an industrial process differs from an unpatentable claim involving the same code running on a generic CPU without any hardware modifications. Examiners and applicants navigating the liminal space between "software-per-se" and "software-plus-device" could benefit from specific examples.
- **Align with International Practice.** Cite or align with international standards whenever you can (e.g. EPO or USPTO guidelines on software patents). This might entail pointing out that the technical effects mentioned are comparable to those that other offices have identified. International consistency would benefit international applicants and make the tests more convincing.
- **Training and Feedback.** Promote examiner education regarding the new regulations, possibly using case study examples. Additionally, consider these guidelines a living document that will be reviewed after a trial period and updated to reflect public feedback from this consultation. As technology and case law advance, the guidelines should be updated on a regular basis to maintain the flexibility of patent regimes for rapidly changing fields.⁸

Conclusion: Implications for India’s Patent Regime

An important attempt has been made to bring India's patent practice into line with the realities of contemporary technology with the 2025 draft CRI guidelines. The draft seeks to guarantee that Indian patents reward real innovation rather than just theoretical concepts by redefining "algorithm," codifying a technical effect test, and requiring richer disclosures. When applied properly, these regulations may provide examiners with more stability and inventors with more precise direction when assessing blockchain or artificial intelligence-based innovations. The

⁸ Swati Sharma, Gitika Suri, Rohin Koolwal and Aryaman Vachher, *Draft Guidelines for Examination of Computer Related Inventions 2025* (Lexology, Apr. 16, 2025), <https://www.lexology.com/library/detail.aspx?g=2908c9fd-0cab-43a5-aabc-7c9914156dc8>.

draft is "a major step towards harmonizing India's patent regime with the fast-changing technological environment," according to one observer.

However, how ambiguities are resolved will determine the final impact. In order to determine what constitutes a sufficient disclosure in an AI patent and to interpret terms like "per se," courts and examiners will probably have to deal with new litigation. The rules lay the foundation, but the house must be built by jurisprudence. Stakeholders should comment on the draft for the time being in order to smooth out any rough spots. India can foster innovation in cutting-edge fields by applying these provisions consistently and fairly. If the 2025 guidelines are successful, they may bring about a more open, forward-thinking patent system that encourages technological advancement while preventing software patents from being unduly broad or ambiguous.