FROM ALGORITHM TO ALVEOLUS: REDEFINING INTELLECTUAL PROPERTY IN THE AGE OF AI-DRIVEN DENTISTRY

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ABSTRACT

Artificial intelligence (AI) is entering dentistry through radiographic interpretation, caries and lesion detection, treatment planning, prosthesis design, prediction, documentation, and clinical decision support. These systems unsettle intellectual-property (IP) analysis because a dental innovation is rarely a single "AI output": it is produced through a chain involving patient-derived inputs, clinical expertise, datasets, software, model development, prompts or parameters, and professional validation. This paper develops a contribution-and-provenance framework for allocating rights and responsibilities across that chain, with India as its principal normative setting and comparative scholarship as context. It distinguishes copyright in software and human-authored expression from machine-generated output; separates patent inventorship from ownership of an invention; and treats patient data governance, confidentiality, and contractual access as questions that cannot be collapsed into IP ownership. The paper argues against both automatic assignment of every output to a platform provider and the creation of a broad exclusive right in autonomous machine output. Instead, it recommends protection for identifiable human creative or inventive contributions, transparent attribution and provenance records, carefully drafted institutional and vendor agreements, and access-sensitive licensing for clinically important tools. Because the available literature was examined through abstracts and primary Indian legal authorities were not available in the selected source set, the proposed framework is analytical rather than a definitive statement of current law.

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1. Introduction

Recent reviews describe dental AI applications in radiographic interpretation, caries and lesion detection, treatment planning, prediction, documentation, and clinical decision support. Such systems can support workflow efficiency, but limited data availability, methodological rigor, privacy, interpretability, external validation, and integration into clinical practice remain constraints.

The legal problem is not simply, "Who owns AI?" A dental AI workflow may involve a patient's image, a clinic's curated records, a vendor's software and trained model, a clinician's diagnostic judgment, and a treatment plan or prosthesis design produced through their interaction. Treating all these elements as one undifferentiated output obscures distinct questions: who created a copyrightable expression; who contributed to an invention; who may control confidential know-how; who is authorized to use patient-derived information; and who bears responsibility for clinical use. Scholarship on AI and IP likewise distinguishes authorship, inventorship, ownership, and the eligibility of an output for protection rather than treating them as interchangeable concepts.[3]

This paper argues for a contribution-and-provenance approach. Existing rights should attach to identifiable human contributions and legally protectable subject matter; commercial access should be allocated transparently by contract; and patient-data governance should remain analytically distinct from ownership of software or clinical outputs. This approach is preferable to assigning every AI-assisted result to the technology vendor, treating a clinician's use of a system as automatic authorship, or creating a sweeping new exclusive right in machine-generated results. India is the principal normative setting, where current scholarship identifies unresolved authorship, ownership, and inventorship questions under the country's IP framework.[4]

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[3] For the statutory separation of these questions in India, see Copyright Act 1957, s 2(d) (definition of 'author'), s 17 (first ownership) and ss 18–19 (assignment); Patents Act 1970, s 2(1)(y) ('true and first inventor'), s 6 (persons entitled to apply) and s 68 (assignments).

[4] Copyright Act 1957, ss 2(d)(vi) and 17; Patents Act 1970, ss 2(1)(y) and 6. The position has developed since much of the secondary literature was written: see Registrar of Copyrights, Order on the application of Dr Stephen L Thaler for the artistic work *A Recent Entrance to Paradise*, Diary No 9356/2022-CO/A (31 August 2026) ('*Thaler* (Copyright Office)') (an AI system cannot be entered as author under s 2(d)(vi); the work was held original under s 13; the applicant was identified as the person who caused it to be created); and *In re Patent Application No 202017019068*, Order under s 15 of the Patents Act 1970 (Indian Patent Office, 15 April 2026) (DABUS cannot be the 'true and first inventor').

2. Method and scope

This is a doctrinal and normative analysis informed by academic literature on AI and IP, dental AI applications, and Indian copyright and patent questions. Relevant publications were identified in Semantic Scholar, Open Alex, and PubMed using searches concerning AI authorship and inventorship, Indian IP law, dental AI applications, and rights in AI-generated clinical outputs. The search was limited to 2015–2026 and to the academic databases selected for this task. The evidence reviewed here consists of abstracts and indexed passages rather than independently retrieved full texts. The academic literature was used to frame the problem and proposed reforms; official statutes, judicial decisions, examination guidance, and government policy were not available in the selected source set. Accordingly, this paper does not purport to verify the current text or authoritative interpretation of Indian legislation, and statutory propositions should be checked against primary sources before publication.

3. The dental AI pipeline and the objects of protection

AI in dentistry may analyze radiographs, CT scans, intraoral images, clinical records, and medical histories, and may support diagnosis, treatment planning, and follow-up. For the IP inquiry, this paper models the workflow in three stages: patient-data input; model development and evaluation; and clinical use, in which a dentist reviews the system's output. Dental AI research examines applications and constraints across these stages, including data quality, privacy, interpretability, and validation. The resulting products may include diagnostic classifications, treatment-planning recommendations, and digitally assisted prosthesis designs.

These stages implicate different legal interests. Software and model architecture may be protected through rights in code or confidential know-how, subject to the relevant law and facts.[5] A human-authored report, illustration, or design may raise a separate authorship question.[6] A technical dental device or process may raise patent questions, but the contribution to its inventive concept must be distinguished from routine use of an AI tool.[7] Patient images

[5] A computer programme is a 'literary work' (Copyright Act 1957, s 2(o); programme defined in s 2(ffc)) and carries the specific rights in s 14(b); a computer programme *per se* is, however, excluded from patentability by Patents Act 1970, s 3(k). India has no trade-secret statute; confidential know-how is protected through contract and the equitable action for breach of confidence: *John Richard Brady v Chemical Process Equipments P Ltd* AIR 1987 Delhi 372; *Zee Telefilms Ltd v Sundial Communications Pvt Ltd* (2003) 5 Bom CR 404.

[6] Copyright Act 1957, ss 2(d) and 13(1)(a) (copyright subsists in 'original' literary, dramatic, musical and artistic works). On the originality threshold, see *Eastern Book Company v D B Modak* (2008) 1 SCC 1 (a minimal degree of creativity, skill and judgment is required; labour alone is not enough).

[7] Patents Act 1970, s 2(1)(j) ('invention') and s 2(1) (ja) ('inventive step'). Section 3(i) excludes any process for the diagnostic, therapeutic or other treatment of human beings, so dental claims will generally need to be directed to devices, materials or technical processes rather than clinical methods of treatment; s 3(k) excludes mathematical or business methods, computer programmes *per se* and algorithms. On s 3(k), see *Ferid Allani v*

and records raise access, confidentiality, and data-governance questions; they should not be presumed to become the property of a model developer merely because they contribute to training or inference.[8] The fact that a system produces a clinically useful answer does not, by itself, determine whether the answer is a protected work, a patentable invention, or merely a decision-support result.

Layer in the dental AI workflow	**Principal issue**	**Proposed analytical treatment**
Patient images and records	Permission, confidentiality, reuse, and governance	Identify the applicable data authority and permitted purpose separately from IP title; document reuse permissions and safeguards.[9]
Software, model, and technical know-how	Rights in code, system design, and confidential information	Identify the actual developer or rights-holder and define permitted clinical use, updates, audit access, and portability contractually.[10]
Clinician's contribution	Diagnosis, selection of inputs, meaningful modification, and validation	Record professional judgment and creative or inventive contribution; do not equate mere operation with authorship or inventorship.[11]

Union of India (Delhi High Court, 12 December 2019) (a technical effect or contribution can take a computer-implemented invention outside the exclusion), and Office of the Controller General of Patents, Designs and Trademarks, *Guidelines for Examination of Computer Related Inventions* (July 2025).

[8] Digital Personal Data Protection Act 2023 ('DPDP Act'), ss 4–8 (grounds for processing, notice, consent, certain legitimate uses and the general obligations of Data Fiduciaries, including security safeguards and erasure once the purpose is served) and s 17(2)(b) (conditional exemption for research, archiving and statistical purposes); Digital Personal Data Protection Rules 2025 (notified November 2025). Commencement is phased, with the main obligations of Data Fiduciaries scheduled to take effect about eighteen months after notification (May 2027), so their application should be checked against the commencement notifications. On informational privacy, see *Justice K S Puttaswamy (Retd) v Union of India* (2017) 10 SCC 1. See also Indian Council of Medical Research (ICMR), *Ethical Guidelines for Application of Artificial Intelligence in Biomedical Research and Healthcare* (2023).

[9] DPDP Act 2023, ss 4–8 and, for research use, s 17(2)(b); ICMR, *Ethical Guidelines for Application of Artificial Intelligence in Biomedical Research and Healthcare* (2023) (data privacy and informed consent). Whether a clinic, hospital or vendor is the 'Data Fiduciary' or 'Data Processor' is a question of fact under the definitions in s 2 of the DPDP Act.

[10] Copyright Act 1957, s 17(c) (in the absence of contrary agreement, the employer is first owner of a work made in the course of employment under a contract of service) and s 19(1) (an assignment is valid only if in writing and signed by the assignor); Patents Act 1970, s 68; on confidential information, see *Brady* and *Zee Telefilms*, cited above.

[11] Compare *Thaler v Comptroller-General of Patents, Designs and Trademarks* [2023] UKSC 49 (an 'inventor' under the UK Patents Act 1977 must be a natural person) with the Indian position: Copyright Act 1957, s 2(d)(vi) (author of a computer-generated work is the person who causes the work to be created) and Patents Act 1970, s 6.

Layer in the dental AI workflow	Principal issue	Proposed analytical treatment
Model-generated recommendation or design	Protection and commercial exploitation of output	Assess the human contribution and the relevant subject matter; avoid automatic provider ownership or unsupported claims of machine authorship.[12]
Integrated device or workflow	Patent attribution, disclosure, and access	Assess the claimed technical contribution and human inventorship on evidence of conception; preserve provenance and an access pathway for clinical use.[13]

4. Copyright: from human authorship to traceable contribution

Copyright questions arise at several points: in software, in curated or annotated materials, and in expressive outputs such as illustrations, reports, or visual designs. They should not be conflated. A clinic may contribute the expertise used to label images without thereby owning the vendor's software; a dentist may select and meaningfully revise an AI-generated patient-facing illustration without thereby acquiring rights in the underlying model; and a system may generate a recommendation that has clinical utility without the recommendation necessarily qualifying as an authored work. The general debate in the literature turns on the extent to which legal authorship depends on human creative contribution and whether a developer, user, or another participant should receive rights when that contribution is absent or difficult to identify.[14]

Indian-focused scholarship describes uncertainty around the treatment of AI-generated works under the Copyright Act, 1957, including the interaction between computer-generated works and the requirements of authorship and ownership.[15] That literature supports a cautious

[12] *Thaler* (Copyright Office), cited above; United States Copyright Office, *Copyright and Artificial Intelligence, Part 2: Copyrightability* (January 2025) (human contribution to AI-assisted outputs is assessed case by case; on current technology, prompts alone do not give sufficient control for authorship); *Thaler v Perlmutter*, No 23-5233 (DC Cir, 18 March 2025) (US Copyright Act requires human authorship; subsequent history, including the certiorari petition docketed as No 25-449, to be checked).

[13] Patents Act 1970, ss 2(1)(y), 6, 7 and 10 (the provisions applied by the Indian Patent Office in the DABUS order cited above). On public-interest limits on exclusivity, see s 83 (general principles for the working of patented inventions, including that patents should not impede protection of public health) and s 84 (compulsory licenses).

[14] See *Eastern Book Company v D B Modak* (2008) 1 SCC 1 and *R G Anand v Delux Films* (1978) 4 SCC 118 (copyright protects expression, not ideas). In *Thaler* (Copyright Office), cited above, the Registrar treated originality under s 13 and attribution of authorship under s 2(d)(vi) as separate inquiries.

[15] Copyright Act 1957, s 2(d)(vi): for a computer-generated literary, dramatic, musical or artistic work, the author is 'the person who causes the work to be created'. See now *Thaler* (Copyright Office), cited above. The earlier registration of the AI painting app RAGHAV as co-author of the work *Suryast* (Diary No 13646/2020-CO/A; ROC No A-135120/2020) was followed by a withdrawal notice from the Copyright Office in November 2021 referring to s 2(d)(iii) and s 2(d)(vi).

distinction between AI-assisted and wholly autonomous outputs, but it does not substitute for examination of the Act, its amendments, or binding Indian decisions. Normatively, the relevant inquiry should be functional: did a human make expressive choices that shaped the protected form of the output, or did the person merely request, select, or receive a result generated substantially by the system? A detailed prompt or iterative curation may be evidence of contribution but should not automatically establish authorship without examining how it affected the final expression.[16]

This approach protects meaningful human work without treating the model as a legal author. It also avoids granting the platform provider a windfall over every output simply because the provider supplied the tool. Contract may allocate commercial use between clinic and vendor, but contract cannot by itself establish that an output meets statutory requirements for copyright protection.[17] Where a clinician creates a substantial original adaptation—such as a carefully designed, patient-specific visual plan—the human-authored contribution should be considered separately from unmodified machine-generated material. The result is a more defensible boundary between protectable human expression and outputs for which exclusive copyright may be unwarranted.

Training inputs raise a different copyright question. Dental datasets may contain images and records created by patients, clinics, imaging providers, or other entities; AI development may also rely on curated annotations or third-party materials. Research on medico-dental AI identifies consent, privacy, security, liability, and IP as interconnected but distinct concerns in the use of facial and clinical images.[6][18] A workable governance arrangement should therefore identify the source and permitted use of training material, document any license or other legal basis for reuse, and limit secondary use to the scope disclosed and authorized. A general assertion that "the clinic owns the data" is too blunt: it may conceal patients' interests

— IJLJ —
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[16] Contrast the reasoning in *Thaler* (Copyright Office), cited above, where the person who designed and configured the system, supplied and curated its inputs and initiated the process was treated as the person who 'caused' the work; and United States Copyright Office, *Copyright and Artificial Intelligence, Part 2: Copyrightability* (January 2025) (assessing prompting, human-authored expressive inputs, and modification or arrangement of outputs separately).

[17] Copyright subsists only in works that meet Copyright Act 1957, s 13; first ownership then follows s 17. Parties may allocate ownership and licenses by agreement (ss 18–19 and 30), but an agreement cannot make a non-qualifying output a copyright work.

[18] Use of copyright works in training is governed by Copyright Act 1957, ss 14, 51 and 52 (exclusive rights, infringement and permitted acts). For the policy position, see Department for Promotion of Industry and Internal Trade (DPIIT), *Working Paper on Generative AI and Copyright, Part 1: One Nation One License One Payment* (8 December 2025) (a committee proposal, not law, for a mandatory blanket license for training on lawfully accessed works with statutory remuneration). Personal-data aspects: DPDP Act 2023, cited above.

and does not specify whether a clinic controls a copy, database, annotation, or legally protected work.[19]

5. Patents: inventorship is not ownership

Dental AI is reported in treatment planning, robotics, and digital prosthesis design, activities that may contribute to technical solutions such as a device or workflow. Patent analysis must distinguish the identity of the inventor from later ownership or entitlement to exploit a patent, a distinction discussed in scholarship on AI-generated inventions.[20] Scholarship identifies difficulty where a system generates an output without an identifiable human inventor. In the United Kingdom, the Supreme Court decision discussed in the literature held that an AI system could not be an inventor under the applicable patent law, while leaving questions about human inventorship and ownership unresolved.[21]

For India, recent scholarship characterizes the patent framework as human-centered and identifies uncertainty concerning AI-assisted and autonomously generated inventions.[22] Another Indian-focused discussion treats the DABUS-related issue as a tension between current inventorship assumptions and AI-enabled innovation. These are secondary accounts, not primary authorities. The paper therefore does not claim that a particular Indian statutory provision or decision conclusively settles every scenario. Its normative recommendation is narrower: patent inventorship should be based on documented human contribution to the claimed inventive concept, not on job title, ownership of the AI system, payment for the work, or a clinician's mere use of a recommendation. Ownership may then be resolved under the applicable statutory rules, employment arrangements, assignments, or contracts, after inventorship has been determined.[23]

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[19] A compilation, including a computer database, is a 'literary work' under Copyright Act 1957, s 2(o); copyright in a compilation and confidentiality in its contents protect different interests: *Burlington Home Shopping Pvt Ltd v Rajnish Chibber* (1995) 61 DLT 6. Patients' rights over their personal data are addressed in DPDP Act 2023, Chapter III, rather than by any statutory concept of data 'ownership'.

[20] Patents Act 1970, s 2(1)(y) ('true and first inventor'), s 6 (the true and first inventor, an assignee, or the legal representative of a deceased inventor may apply) and s 68 (assignments must be in writing).

[21] *Thaler v Comptroller-General of Patents, Designs and Trademarks* [2023] UKSC 49. To similar effect in the United States: *Thaler v Vidal*, 43 F.4th 1207 (Fed Cir 2022), cert denied, 143 S Ct 1783 (2023).

[22] Patents Act 1970, ss 2(1)(y), 6, 7 and 10. The Indian Patent Office refused the DABUS application: *In re Patent Application No 202017019068* (Order under s 15, 15 April 2026) (DABUS cannot be the 'true and first inventor'; the requirements on declaration of inventorship and proof of right were not met). An appeal is reported to be pending before the Delhi High Court: *Stephen Thaler v Assistant Controller of Patents* (notice issued; reported 30 July 2026; current status to be checked). The 2025 CRI Guidelines distinguish AI-generated inventions (not patentable, because AI cannot be an inventor) from AI-assisted inventions (not excluded as such, subject to the usual criteria and a technical effect).

[23] Patents Act 1970, s 6 and s 68. The Act contains no dedicated provision on employee inventions, so entitlement ordinarily turns on assignment and the contract of employment.

Dental institutions and technology providers should preserve a contemporaneous record of the problem identified, human hypotheses, model inputs and outputs, subsequent experiments, and the reasons a proposed solution was adopted. Such a record can help distinguish routine AI assistance from human contribution to conception and can support transparent disclosure.[24] It also reduces the incentive to name a person as inventor merely to overcome uncertainty. In the absence of a verifiable human inventor, policymakers should examine whether a limited alternative is justified but not presume that a new exclusive right is necessary. For dentistry, this paper recommends considering any new right only after assessing its effects on patient access, follow-on research, and competition.

6. Contracts, clinical access, and stewardship

Scholarship on AI-enabled medical innovation identifies equitable access, benefit sharing, and licensing as concerns when IP control affects access to healthcare technologies.[25] For dental institutions, this supports express agreements that allocate practical rights and duties among clinics, clinicians, software vendors, researchers, and, where relevant, data contributors. Agreements should specify permitted use of clinical inputs; whether data may be used to train or improve a model; rights in annotations and clinic-created materials; access to outputs and audit trails; responsibility for updates and security; retention and deletion; publication and research use; and terms for continued access if a vendor relationship ends. These terms should be understandable to clinicians and should not undermine separate obligations owed to patients.[26]

The aim is not to make every clinic a co-owner of a vendor's model. Rather, contractual governance should prevent a one-sided allocation in which a vendor gains broad reuse rights over clinically generated material while the clinic receives no meaningful control over access, portability, or secondary use. Conversely, a clinic should not claim ownership of a model or output solely because it supplied patient data or paid for a service. In dentistry, access-sensitive licensing may be particularly relevant where a tool is integrated into routine diagnosis or treatment planning and switching costs may affect continuity of care.

[24] Patents Act 1970, s 10(4) (the specification must describe the invention fully and particularly, including its operation, and disclose the best method known to the applicant); the 2025 CRI Guidelines address sufficiency of disclosure for AI and machine-learning inventions.

[25] Patents Act 1970, ss 83–84 and 92 (public-interest principles and compulsory licensing). On vendor lock-in and refusal to deal, see Competition Act 2002, s 4 (abuse of dominant position), read with s 3(5) (reasonable conditions necessary to protect intellectual property rights).

[26] Indian Contract Act 1872, ss 10 and 27 (the latter voids agreements in restraint of trade, which bears on exclusivity and post-termination restrictions); Copyright Act 1957, ss 18–19 and 30; Patents Act 1970, s 68; DPDP Act 2023, s 8(2) (a Data Fiduciary may engage a Data Processor only under a valid contract).

Data governance must remain distinct from IP ownership. A patient's radiograph may be stored, licensed, or processed under rules that do not answer who owns copyright in a software model or whether a treatment design is patentable. Dental AI reviews identify privacy and data security, bias, transparency, and accountability as recurring legal and ethical concerns. A responsible allocation model should therefore include data minimization, purpose limitation, access controls, security safeguards, and a clear route for correcting or contesting clinically consequential outputs. Those safeguards are proposed here as governance principles; the applicable Indian legal obligations require verification against current primary authorities.[27]

7. A contribution-and-provenance framework

The following framework offers a practical way to evaluate IP claims in AI-driven dentistry.

First, classify the asset. Specify whether the claimed subject is software, a dataset or annotation set, an expressive work, a technical invention, confidential know-how, or a clinical recommendation. Do not use "AI output" as if it were a single legal category. This classification tracks the literature's distinction between AI as a tool and as a system that autonomously generates outputs, and its separate treatment of authorship and inventorship.

Second, map contribution and control. Record which human actors selected or curated inputs, framed a technical problem, made expressive choices, modified a generated result, or validated a proposed invention. Record the model's role separately. This provenance record is not itself proof of legal authorship or inventorship, but it makes the factual basis for attribution reviewable and reduces post hoc claims.

Third, separate entitlement from access. Determine legal entitlement under the relevant IP regime first; then establish by agreement who may use, update, license, or commercialize the asset. A contract should not deem the AI to be an author or inventor, nor should it imply that a party owns patient-derived material when the agreement only grants limited processing rights. Comparative scholarship identifies ownership allocation among developers, users, and other

[27] DPDP Act 2023, s 8 and DPDP Rules 2025 (phased commencement, with the main Data Fiduciary obligations from May 2027); *Justice K S Puttaswamy (Retd) v Union of India* (2017) 10 SCC 1; ICMR, *Ethical Guidelines for Application of Artificial Intelligence in Biomedical Research and Healthcare* (2023) (accountability, data privacy, validity and trustworthiness among its principles); Central Drugs Standard Control Organization, *Guidance Document on Medical Device Software*, Doc No CDSCO/MD/GD/MDSW/01/2026 (21 July 2026), issued under the Medical Devices Rules 2017 (software intended for a medical purpose, including AI-enabled software, may be regulated as a medical device).

participants as unresolved, supporting the need for express contractual terms rather than assumptions.[28]

Fourth, preserve patient-centered safeguards. An IP claim should not override appropriate limits on reuse, confidentiality, or clinical accountability. In particular, a vendor's exclusive control of an algorithm should not prevent the treating professional from understanding material limitations, documenting reliance, or maintaining continuity of care. The systematic review of dental AI ethics and law places patient autonomy, privacy, fairness, transparency, accountability, and regulatory frameworks among the principal governance domains.[29]

Fifth, use targeted reform before creating new exclusivity. The literature offers competing approaches: one proposal would create a separate right for machine-generated outputs, while another argues for retaining human-centered inventorship[30] This paper recommends clarifying, through legislation or authoritative guidance, how existing human-authorship and inventorship tests apply to AI-assisted creation; requiring proportionate disclosure of AI involvement and relevant provenance; and encouraging licensing arrangements that support research and clinically necessary access.[31] If wholly autonomous outputs remain unprotected, that may reduce exclusive appropriation but does not necessarily prevent commercialization through services, contractual access, or protection of the underlying software and know-how. Any sui generis entitlement should be time-limited, narrowly defined, and justified by evidence that existing tools do not adequately incentivize socially valuable innovation.

8. Conclusion

AI-driven dentistry makes IP questions concrete because algorithms act on clinical data and influence diagnosis, planning, design, and treatment. Yet the relevant asset is not always the system's final output. It may be the software, a human-designed workflow, a dataset, an

[28] Copyright Act 1957, ss 17–19; Patents Act 1970, s 68. In *Thaler* (Copyright Office), cited above, authorship under s 2(d)(vi) and first ownership under s 17 were treated as linked but separate steps. A license to process personal data under the DPDP Act 2023 does not transfer ownership of the underlying material.

[29] *Justice K S Puttaswamy (Retd) v Union of India* (2017) 10 SCC 1; DPDP Act 2023, s 8; ICMR Guidelines (2023) and CDSCO, *Guidance Document on Medical Device Software* (2026), both cited above (the latter addresses quality management, post-market surveillance and the management of software updates).

[30] For an existing statutory model, see Copyright, Designs and Patents Act 1988 (UK), ss 9(3) and 178 (computer-generated works). The UK Government's *Report on Copyright and Artificial Intelligence* (18 March 2026) proposes removing that protection for wholly computer-generated works while retaining protection for AI-assisted works; no timetable for repeal was set. India's Copyright Act 1957, s 2(d)(vi), already attributes authorship of computer-generated works to the person who causes them to be created: see *Thaler* (Copyright Office), cited above.

[31] Existing guidance vehicles include the 2025 CRI Guidelines (Indian Patent Office) and the reasoned order in *Thaler* (Copyright Office), cited above. Part 2 of the DPIIT working paper on generative AI and copyright, which is to address copyrightability and authorship of outputs, had not been published as at February 2026; check whether it has since been released.

expressive adaptation, a technical invention, or a patient-specific recommendation, and each demands a distinct analysis. The paper's contribution-and-provenance framework separates those objects, traces human and machine contributions, and distinguishes legal entitlement from contractual access and patient-data governance.

For India, the immediate priority is doctrinal clarity and reliable primary-source analysis, not automatic recognition of AI as an author or inventor. Human contributions should remain protectable where the applicable legal criteria are met; inventorship should reflect actual contribution to the claimed invention; and contractual arrangements should define access, reuse, audit, and continuity without displacing patient-centered duties. A limited new right for autonomous outputs may warrant future consideration, but only if evidence shows that narrowly tailored licensing and existing IP protections are inadequate. The resulting framework would protect genuine human innovation while reducing the risk that proprietary control over dental AI frustrates clinical access, research, or responsible professional practice.

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