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LEGAL ASPECTS OF THE INTERNET OF THINGS (IOT) IN INDIA

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We humans are touted to be social creatures, we thrive when interconnected, well turns out technology also shares this common trait of its progenitors, it thrives with interconnectivity with humans as well as other devices, this has led to evolution of a whole new branch of technological field termed as Internet of Things (IoT). IBM defines IoT as¹ “A network of physical devices, vehicles, appliances, and other physical objects that are embedded with sensors, software, and network connectivity, allowing them to collect and share data.”, a cursory look around gives us a picture how well these “smart devices” have integrated in our daily routines, from your smart watches and health trackers, to smart home appliances, it is almost improbable to go about your day without interacting with one or more such devices. A technology with such wide-ranging integration across your daily livelihood does warrant some sort of regulation, some semblance of order to this flux of computing advancements into IoT and edge computing. Our entire Legal system is thrown into spanner while dealing with ever evolving world of tech, with no single comprehensive legislation fulfilling the needs, and with different overlapping regulations and Acts spanning the last two decade, the ever so archaic legal system of our country has a long and convoluted task at its hands. IoT devices not only create a procedural problem with framing regulations, it even extends to legal challenges involving Privacy, Data security and data ownership.²

In the landmark case of Justice K.S. Puttaswamy And Anr. vs Union Of India And Ors.³ Justice Chandrachud famously said “Privacy is the constitutional core of human dignity”, this case

¹International Business Machines Corp., *What Is the Internet of Things (IoT)?*, IBM (last visited Sept. 12, 2026), <https://www.ibm.com/think/topics/internet-of-things>.

²See generally Shreya Malhotra, *Application and Legal Challenges of the Internet of Things*, iPleaders (Nov. 23, 2020), <https://blog.iplayers.in/application-legal-challenges-internet-things/>.

³*Justice K.S. Puttaswamy v. Union of India*, (2017) 10 S.C.C. 1 (India).

further established the right to privacy to be intrinsic to article 21 of the Indian Constitution⁴ and part III as whole. This is to show our legal system does understand the need for guaranteeing the right to privacy for each individual.

With the increase usage of IoT devices, the question of privacy of the users becomes imperative.⁵ The fact remains that these IoT devices are monitoring your heartrate, your location, your step counts, your other physiological data, along with your personal information fed to your mobile phones or laptops to which these smart devices are connected with, all of these forms of data would come into the category of personal data according to section 2(t) of Digital Personal Data Protection Act, 2023⁶. Adding onto this, all this data is primarily stored with various cloud-based services, and sharing of this data is dealt with many companies beyond the manufacturer of the given IoT device. In accordance to section 4 of DPDP Act⁷, the personal data must only be processed in accordance to provisions given in the act for lawful purposes with the consent of the person whose data is being processed, section 5 of DPDP Act⁸ further talks about providing the notice to the user on how and for what purpose their data is being processed for.

The term consent is further described in the section 6 of DPDP Act⁹, that consent shall be free, specific, informed, unconditional and unambiguous with a clear affirmative action, and the very IoT devices which we so fondly don on our hands, do they explicitly ask for consent before setting up the device? Does the third-party User interface clearly explain to us the terms and conditions which we ever so blindly accept? These are probably the biggest questions that come to your mind when we talk about dealing with such sensitive data about our very daily lives.

The GDPR, 2018 of European Union article 9¹⁰ classifies specific type of personal data, which is gathered by the smart devices primarily, as “tracked data” and provides these specific categories of personal data, heightened protection when it comes to assenting to collection and

⁴India Const. art. 21, pt. III.

⁵See generally Sayantika Halder, *Internet of Things (IoT): Balancing Connectivity and Privacy in India*, 7 Int'l J.L. Mgmt. & Human. 2029 (2024).

⁶Digital Personal Data Protection Act, 2023, § 2(t), Act No. 22 of 2023 (India).

⁷*Id.* § 4.

⁸*Id.* § 5.

⁹*Id.* § 6.

¹⁰Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 (General Data Protection Regulation), art. 9, 2016 O.J. (L 119) 1 (EU).

processing of said data. This is a clear distinction which still lacks in our own various legislation present in dealing with data and IoT devices.

Another pertinent question of data ownership arises, as the data is constantly shared, interpreted simultaneously and further processed by IoT and its other connected devices. So, who actually owns the data, for example, when your smart garage opens up automatically when you move in with your car, the ownership of this data generated by these IoT devices on its own becomes a perplexity deemed to be solved. The issue of jurisdiction in cyberspace, with keeping IoT devices in focus, resists tying to one geography. Traditional tools for fixing jurisdiction which included minimum contacts, long-arm statutes, forum-selection clauses, to name a few, do exist, however IoT complicates them further because a single device typically has components and interlinked services from multiple companies across jurisdictions, so there's no single obvious forum.¹¹

Despite it all, the evolution of IT laws in India is an ongoing journey, starting from IT act, 2000¹², to DPDP Act, 2023, along with DPDP rules, 2025 there is a constant and still ongoing efforts to safe guard the interests of the consumers of technology in the form of IoT.¹³ Code of Practice for Securing Consumer IoT Devices (TEC 31318:2021)¹⁴ is present for setting baseline security requirements in various IoT devices on the end of manufacturer as well. Continued efforts in reading of various overlapping regulations and legislation, spanning various sectors and time periods, would be crucial for any future dispute arising in matters pertaining to IoT, with courts being the final litmus test of all the measures taken.¹⁵ Even with their flaws, the presence of these statutes provides a framework and scope for courts to assist in the avenue of providing justice, and safeguard one's rights, Interconnecting the avenues of Law and Technology much like the connectivity provided by the network of IoT.

¹¹Legal Resolved, *Internet of Things: Legal Perspective—Risk & Challenges*, Medium (June 9, 2017), <https://medium.com/@legalresolved/internet-of-things-legal-perspective-risk-challenges-cd98b7a05bf7>. (last visited Sept. 12, 2026)

¹²Information Technology Act, 2000, Act No. 21 of 2000 (India).

¹³See generally American Chamber of Commerce in India, *Comments on Draft Internet of Things (IoT) Policy* (Dec. 1, 2014), <https://amchamindia.com/wp-content/uploads/2024/02/Comments-by-Amcham-India-on-draft-Internet-of-Things-IOT-Policy.pdf>. (last visited Sept. 12, 2026)

¹⁴Telecommunication Engineering Centre, Dep't of Telecommunications, *Code of Practice for Securing Consumer Internet of Things (IoT)*, TEC 31318:2021, <https://tec.gov.in/M2M-IoT-technical-reports> (last visited Sept. 12, 2026); see Press Information Bureau, *Telecommunication Engineering Centre (TEC) Releases 'Code of Practice for Securing Consumer Internet of Things (IoT)'* (Jan. 5, 2022), (last visited Sept. 12, 2026) <https://www.pib.gov.in/PressReleasePage.aspx?PRID=1787727>.

¹⁵See generally NASSCOM, *IoT Technology in India*, Bus. Process Incubator (Nov. 9, 2020), <https://www.businessprocessincubator.com/content/iot-technology-in-india/>. (last visited Sept. 12, 2026)