

1. Abstract

This doctoral thesis, titled "Escalating Standardisation in the Internet of Things: A Legal Study of FRAND Licensing Terms," examines the role of standard-setting organizations (SSOs) in the IoT industry (encompassing 36 SSOs), particularly in applying Fair, Reasonable, and Non-Discriminatory (FRAND) licensing responsibilities and patent disclosure requirements through their IPR policies and by-laws. The study's findings include, diverse patent disclosure and licensing practices. The research uncovers the significance of uniform and transparent patent disclosure, mandatory licensing obligations, and need of royalty structuring and dispute resolution in the approaches adopted by SDOs.

The thesis also delves into SEP and FRAND commitments in the telecom sector, analysing various litigation outcomes in different forums. Courts consistently uphold the obligation of SEP holders to license under FRAND terms, with alleged infringers obligated to negotiate in good faith. Seeking injunctions without offering FRAND licenses or not negotiating in good faith is considered a breach of FRAND obligations. Abuse of dominant position by SEP holders in licensing is addressed, with frameworks established for determining injunctive relief abuse. The research contributes to a better understanding of the complex legal and technical issues surrounding standardization in the IoT industry and provides recommendations for addressing legal and economic concerns pertinent to the development of the IoT sector.

By comprehensively analysing the landscape of IoT-related patents (133,932 patents) and standards, the study highlights the involved technology spread and organizations, jurisdictions, and technology segments. Furthermore, the study examines the Indian context, highlighting patent trends yet lack of standardisation efforts in IoT-related developments. It discusses the role of Indian corporations, academic institutions in patent filings and standardisation. The research showcases India's emergence as a significant player in IoT patents, advocating for transparent policies that encourage innovation and competition.

The thesis suggests enhancing SEP disclosure transparency, considering patent pools for managing IoT intellectual property, including Alternative Dispute Resolution (ADR) mechanisms, and advocating uniform IP policies across SDOs. It underscores the need for adaptive legal frameworks that balance the interests of all stakeholders in the dynamic IoT environment.

Keywords: Standard Essential Patents, FRAND, IoT Patents, Standards, Standard Development