6GEdge Technology: Block-chain Powered Infrastructure

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Abstract -- **The 6GEdge technology developed under application invention number 202311032190 offers promising infrastructure for real-time customization and delivery of the AI mediation module capabilities via BaaS and SaaS models, especially to further Sustainable Cities. The ultra-low latency and exponential compute capacity of 6GEdge would enable dynamic onboarding of new mediation algorithms, nano-services for speech/text analytics, IoT integration with smart courts infrastructure, and augmented visualization modules - with near zero lag.**

Keywords: 6GEdge technology, Block-chain-as-a-service, Intellectual property rights, Actionable intelligence, Software-as-a-, service, Mediation algorithms, Speech/text analytics, Khastgir algorithm, CSIRTs

I. INTRODUCTION

AUTHOR filed a patent encompassing proprietary algorithm comprising both Block-chain-as-a-Service (BAAS) and Software-as-a-Service (SAAS) as "At least one Actionable Intelligence (AI) Training Module Algorithm for Intellectual Property Rights (IPRs) and NFTs in Blockchain on Impula Network" bearing patent app number 202311032190 early May, 2023 before the Indian Patent Office (IPO) to tackle massive problems in online world deployed on the communication network.

The block-chain-powered components comprising a plurality of master modules and associated a plurality of sub-modules across digital rights management considering and respecting data privacy laws globally, automating licensing based on several important parameters, royalty distribution between different players aka users, and IP asset tokenization functionality within the Actionable Intelligence (AI) training module lend themselves well to "Block-chain-as-a-Service" implementation [1].

In one of the embodiments, the present system provides a framework to allow one or more mediation algorithms and smart contract logic developed to be offered as cloud-hosted block-chain infrastructure-as-a-service (IaaS) APIs. Customization framework is deployed to occur on demand in real time by using and deploying 6GEdge technology developed under the app bearing number 202311032190. Global accessibility and maintenance advantages arise versus standalone offerings,

especially for international dispute contexts and institutional investors are going to be driving force to deploy 6GEdge in real time and latency period is zero in controlled environment where information access is free for private block-chain players aka users.

The Proof-of-work of the present block-chain system provides the miners on the impula block-chain network to expend computational effort to add validated blocks of transactions to the distributed ledger, while also preventing malicious behavior. One of the algorithms is an infinite loop which ensures integrity and incentives alignment and the duration to solve the equations associated increases as real time learning of the one or more AI modules and sub-modules are in alignment with the SDG 2025. When applied to the previously proposed block-chain framework for managing IP assets and rights distributions for sustainable cities development projects #SDG11, the proof-of-work function as follows:

- Individuals and companies participating in open innovation challenges organized around urban solutions would submit environmental IoT sensor data or climate threat models from the built world projects.

- This data gets fed into validation algorithms.

- Miners are enabled to execute complex mathematical problems derived from these environmental informatics datasets - thereby expanding insights for future projects while confirming current findings to achieve Carbon Negative.

- New blocks are added containing innovation contest reward tokens. By tying the competitive proof calculations to actual sustainability-enhancing analytics as mining work, it aligns incentives. Participants get valued project transparency, technologists get key platform rights, miners earn coins, and cities optimization accelerates across crucial metrics towards ecological quality, renewable energy adoption, resilience infrastructure, and livability for communities.

The collaborative yet decentralized structure powered by insightful proof-of-work mining epitomizes Carbon negative climate accountability. Therefore, in essence, integrating

transparency, democracy and green progress into the blockchain architecture enables a verified, equitably participatory, and optimizing foundation - ushering more sustainable urban innovation rooted in shared successes.

The 6GEdge technology developed under application invention number 202311032190 offers promising infrastructure for real-time customization and delivery of the AI mediation module capabilities via BaaS and SaaS models, especially to further SDG #11 (Sustainable Cities). The ultra-low latency and exponential compute capacity of 6GEdge would enable dynamic onboarding of new mediation algorithms, nano-services for speech/text analytics, IoT integration with smart courts infrastructure, and augmented visualization modules - with near zero lag. This provides continuous feature enhancement accessible globally in real time where a lot of data parameters are validated considering historical data associated with users.

However, International investors and Web3 consortiums focused on climate tech and equitable access solutions would also help proliferate adoption of the 6GEdge-hosted modules across both advanced and emerging judicial ecosystems. The bandwidth abundance unlocks immersive experiences stretching from administrator dashboards to VR courtroom caucusing powered by real-time data.

Private blockchain implementations guarantee security while still encouraging open participation under controlled transparency settings - bringing accountability alongside efficiency for public-interest dispute contexts around cities, infrastructure projects or environmental issues. So as 6GEdge unlocks next-generation connectivity and computational capabilities in an inclusive Web3 spirit, the scalable and customizable delivery of AI mediation innovation modules and sub-modules developed under app bearing number 202311032190 reaches all corners and bridging current divides.

SaaS Relevance - Similarly, packaging the instructional content and pre-trained negotiation recommendation models as subscription-based "Software-as-a-Service" accessed seamlessly via web interfaces allows scalability across 192 plus countries.

The different IP training modules on intellectual property rights, NFTs, and blockchain technology integration lay emphasis on multiple interconnected submodules, created by Khastgir algorithm methodology, tailored for deployment on the Impula Network platform with the intent to support one or more sustainable development goals.

One of the master modules includes plurality of foundational modules to understand Intellectual Property associated with users at first instance and evaluate multiple parameters to upskill

them. The multiple users of the application in the real time have the ability to upskill with foundations of Intellectual Property and Web 3.0 overview by undertaking different exercises, surveys, and polls in real time with multiple administrators facilitating the process in different time zones. For example, one of the embodiments is having the overview of different Intellectual Property Rights (IPRs) - patents, trademarks, copyrights, trade secrets and Geographical indications and plant variety protection. Once the user has a good understanding of Intellectual Property Rights (IPRs) the user is provided with the opportunity to create non-fungible tokens (NFTs) and protect the created IPRs by way of executing smart contracts on the impula network.

II. THE DISPUTE RESOLUTION

The dispute resolution on the smart contracts is handled by the decentralized autonomous organizations (DAOs) associated with different clusters of the impula network, for example a plurality of sustainable communities and the same is cascaded once the training reaches serving point by the khastgir algorithm.

In the offline world any dispute in question and especially dispute resolution clauses are handled by different mechanisms to save time. For example, in any intellectual property mediation, having a clear focus on the core technical matters and elements of the IP associated in contention is honest key. Wing master module of the present invention, act as online Actionable Intelligence (AI) mediator master module direct the discussion between the users to not just legal points, but really understand each party's technical know-hows which are around copyrights, trademarks, patents, trade secrets, data sets or other proprietary know-how enough to craft suggestions balancing control, licensing terms, competitive risks, and knowledge sharing tradeoffs in real time.

Another embodiment relates to opportunities for protecting and managing digital IP Assets and sub-modules comprising codes to apply for blockchain-registered and smart contract-enforced NFT-based patents and trademarks. Moreover, implementing tokenized licensing models backed by crypto Automated royalty distribution based on payment triggers using zero knowledge proofs for IP trade secret protections and further anchoring IP ownership with digital fingerprints.

In yet another embodiment, sustainable city models comprising advancement by Blockchain and IP Synergies. Multiple submodules are deployed to develop sustainable communities to further strengthen Smart city infrastructure projects financed via tokenized IP assets as collateral and DAOs with token-gated ecosystem participation managing urban informatics IP Licensing municipal data to FinTech providers under programmable agreements under smart contracts.
In yet another further embodiment, a plurality of responsible AI

and Blockchain guiding principles sub-modules are trained to deliver output data relating to multiple pathways for algorithmic transparency, privacy and accountability for fortifying trust. Overall, the Khastgir algorithm ensures IPR arrangements adhering to sustainability and social value safeguards.

With approximately more than 103 sub-modules trained to cover key concepts across IP, blockchain and responsible technology integration tailored to sustainable cities, this initial module cluster creates a learning foundation for the Impula Network library as crafted using Khastgir algorithm pedagogical methods. Multiple associated modules would build in interoperable layers. FIG. 1 illustrates the overall framework of the present system.
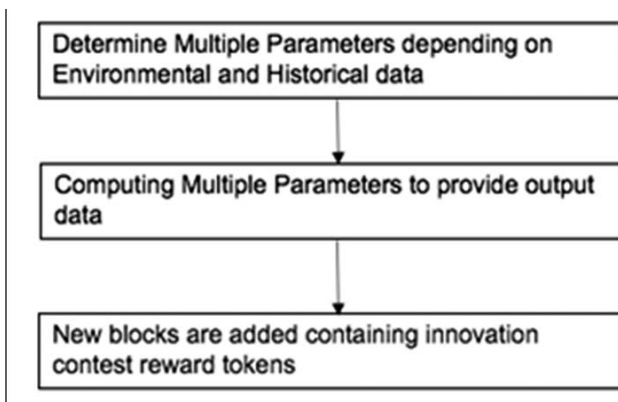

Figure 1. Overall framework of the present system.

USE CASE STUDY

Use-case study summarizing how the wing master module could leverage its AI mediation capabilities to enable mutual understanding and equitable licensing between 6G edge technology stakeholders related to various forms of proprietary technical know-how. This enables the AI mediation modules' updating expertise to be delivered continuously without needing labor-intensive enterprise installation. Flexible configuration of virtual caucusing features, explainability dashboards for model transparency, and integration support for partner dispute resolution platforms also grows feasible through SaaS. Overall, BaaS and SaaS align well to the ethos around IP rights automation and on-tap accessibility underscoring the AI modules design identified in reference application #202311032190. Embracing cloud delivery mirrors the forward-looking nature of this offering itself.

Wing Master Module serves as chief AI mediator leveraging natural language processing, machine learning algorithms (khastgir algorithm) and a vast knowledge graph accumulated from millions of past mediation datasets.

In this user scenario, a commercialization disagreement erupts related to licensing terms and IP sharing controls necessary for collaborative 6G edge infrastructure rollout. Via virtual caucusing, Wing Master Module confidentially elicits exhaustive detail from both parties regarding the most essential patents, proprietary analytics, copyrighted data, and confidential techniques in dispute. This illuminates must-have versus nice-to-have IP components.

By comprehending the technical landscape and constraints in granular detail, Wing Master Module suggests a tiered licensing and joint ownership structure providing guaranteed access by entity in dispute to crucial real-time automation insights.

Moreover, the Wing Master Module balances knowledge exchange value against excessive rights dilution through a cooperative commercialization agreement - aligning asset synergy potential to stakeholder goals. With Wing Master Module AI proficiency accurately unpacking technical dynamics and possibilities in mediation, equitable licensing suggestions arise from reality, not legal vagaries - the hallmark of its mastery.

It's about comprehending what makes this IP uniquely valuable and vulnerable - drilling into the real-world products, experiments, algorithms, discoveries, insights or other R&D outputs dependent on these assets. Likewise, for mutually beneficial IP partnerships and pooling to take shape between companies, the focus must start with mapping technical synergies, gaps and possibilities through detailed review of internal technical landscapes. Where can shared core strengths or combined complementary specializations unlocked through pre-competitive collaboration propel practical innovation faster than going it alone? Clustering discoveries into licensing buckets subsequently occur more readily once promising terrain is charted. In both instances - navigating conflict or partnership - technical comprehension, specificity and mapping provides the territory where creative solutions can be pioneered based on reality, not legal vagaries. Focus must lock onto this fulcrum so technical exchange can manifest aligned to genuine potential and hazards.

Explanation of how a proof-of-work system is designed for the Khastgir Algorithm to incentivize carbon-negative transactions, with examples:

- At its core, proof-of-work represents the concept that computational effort must be expended to secure networks, validate transactions, and earn rewards. For blockchain-based applications of the Khastgir Algorithm mediation modules, an innovative carbon-negative proof-of-work mechanism could promote sustainability.

- Reforestation Mining - The algorithms required in real time are solving complex equations related to predictive models guiding replanting efforts in degraded habitats as

proof computational work. Successfully powering these calculations earns forest conservation crypto donations.

- Renewables Optimization - Reward mediation module users who leverage their computers to run iterative simulations that help optimize solar/wind farm locations or hydroelectric dam parameters for improving renewable energy infrastructure. Negative Emissions RDD - Users could run climate RDD (Resilient Distributed Dataset) computations like regional carbon capture forecasts or atmospheric particle flow simulations that strengthen climate reversal science, funded by eco-focused crypto coins.

- Smart Grid AI Tuning - Proof-of-work algorithms could involve tuning AI models in sandwich layers forecasting local load, transmission dynamics and the like to cut smart grid emissions. Users get energy future royalties as a reward. In essence, proof-of-work mechanisms that drive carbon-negative or Earth-healing computation get embedded throughout, steering sustainability both digitally and physically at scale through community incentives.

REFERENCE

[1] https://www.blockchainailawyer.com/

Advocate Prity Khastgir is a registered patent attorney in India working in cyber laws, global intellectual property laws, international commercial mediator for commercial disputes, facilitating human capacity building for youth globally and active in working group of international telecommunication policies and advising conglomerates across seven continents to combat cyber crime in online space with over 18 years of work experience.

She is an international Speaker speaking on strategic aspects of amalgamating technology, cyber law & business in Industry 4.0 Spectrum Era. Active speaker at tech global conferences & actively participate in ITU Regulatory Workshops & Initiatives on SDGs & CSIRTs. Seasoned Software and Hardware Patent Strategist with expertise in IP portfolio research which she deploys in writing smart contracts, cross-border tech transactions, writing cross-licensing agreements to provide win-win approach for product clearance, FTO opinion, and obviate patent infringement & invalidity. She represented the Indian delegation at CyberDrill event held at KL, Malaysia in 2019. Prity has been instrumental in facilitating fostering partnerships with academia and ICTs, government agencies, to stimulate social innovation activities that empower communities to benefit from the digital revolution Industry 4.0.

She is recognized as a seasoned software and hardware patent strategist. Her innovative approach extends to writing smart contracts, facilitating cross-border tech transactions, and structuring cross-licensing agreements. This strategic acumen ensures a win-win approach for clients, offering comprehensive solutions for product clearance, freedom-to-operate opinions, and mitigating risks of patent infringement and invalidity. A notable facet of Prity's career lies in her pivotal role as an active advocate in the ITU working group, where she contributes to shaping global telecommunication policies. Her involvement in ITU Regulatory Workshops and Initiatives on SDGs and Computer Security Incident Response Teams reflects her commitment to driving positive change in the digital realm.

Prity Khastgir is not only an accomplished legal professional but also an entrepreneur at heart. As the founder of Tech Corp International Strategist, a global intellectual property consultancy firm based in Aerocity, New Delhi, she spearheads initiatives that bridge the gap between technology, law, and business. Of notable mention is Prity's groundbreaking work in the realm of 6G Edge technology, where she stands as an inventor.