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(57) Abstract :

The invention discloses a decentralized blockchain system (100) for real-time logistics tracking, comprising a distributed ledger (101), IoT sensors (201), GPS modules (202), smart contracts (301), and distributed validation nodes (401). The system ensures transparency, immutability, and efficiency in logistics operations. IoT-enabled devices provide shipment condition and location data, while blockchain guarantees tamper-proof records. Smart contracts automate processes such as verification and payments. The invention offers scalable integration with logistics systems (501), improving trust, reducing fraud, and enhancing global supply chain visibility.

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