Summary of Blockchain and IoT-based architecture design for intellectual property protection Research Paper

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Link to the Orginal Paper

1 Summary

This paper proposes a high-level architecture design of **blockchain** and **IoT**-based intellectual property protection system, which can help to process three types of intellectual property:

- patents, copyrights, trademarks etc.,
- industrial design, trade dress, craft works,
- plant variety rights

Using blockchain peer-to-peer network and IoT devices the proposed method can help people to establish a trusted self organized open and ecological IP protection system.

2 Key Contributions

(with ref. to author's approach)

Using Blockchain P2P network and IoT devices , the system allows for the secure, transparent, trustable, traceable, auditable and tamper-proof recording of transactions related to intellectual property protection. The data can be transferred between digital devices without any human interaction or manual input from either humans or computers.

The proposed system uses IoT devices to link computing devices and digitized machines, things, objects, animals and people that are provided with digital unique identifiers (UIDs).

2.1 Architecture

An architecture which represents the communication between IoT devices based on their UID's provided is given below. Layers used in this architecture:

- Sensing Layer
- Network Layer
- Application Layer

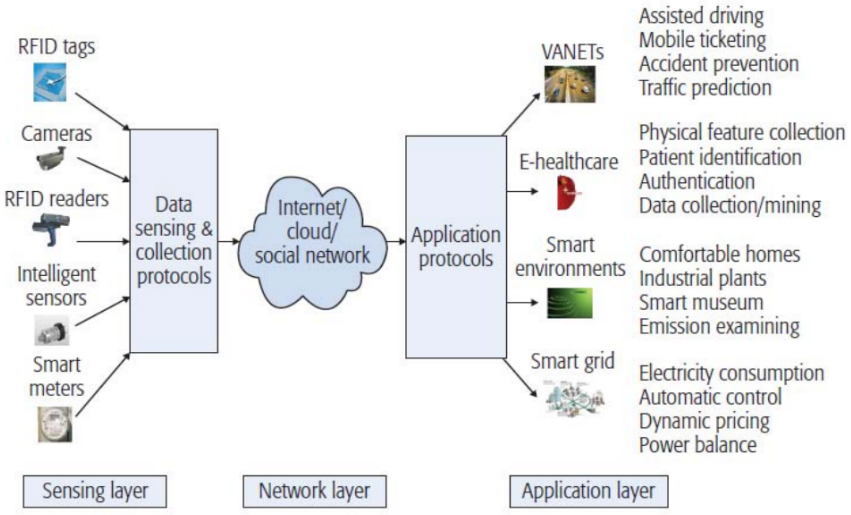

Figure 1: Cloud-based IoT architecture

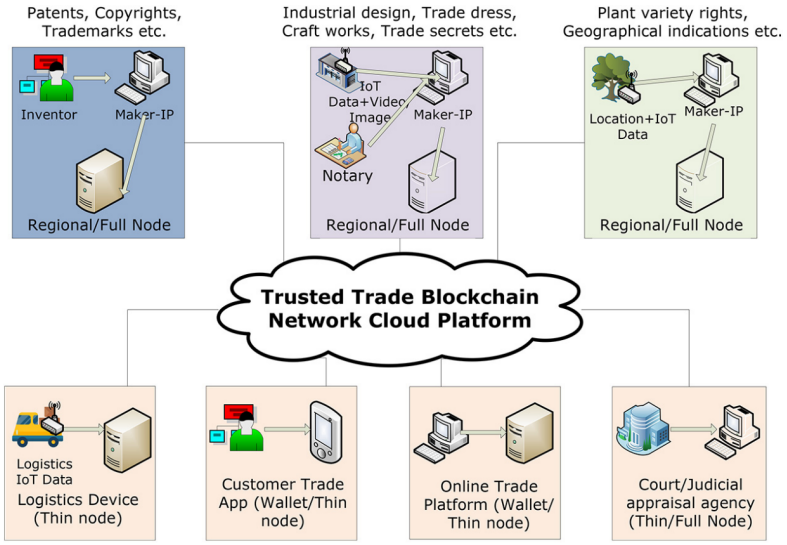

Figure 2: Blockchain architecture proposed by the author

Blockchain and IoT system architecture with the necessary Iot protocols being specified in the figure given below.

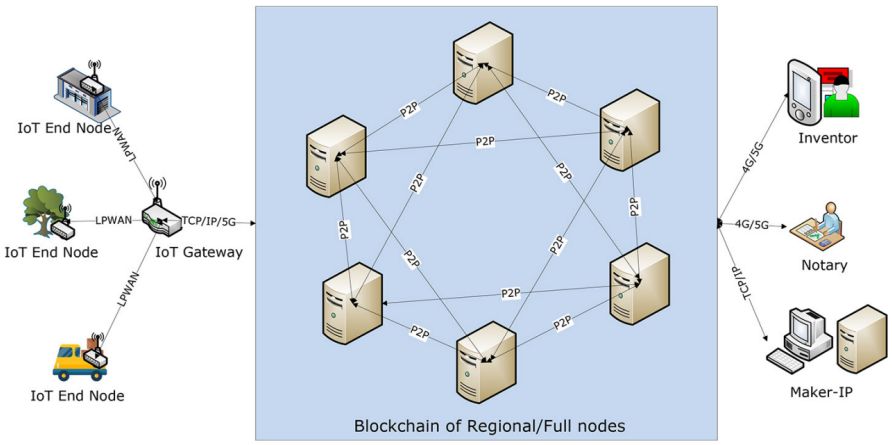

Figure 3: Blockchain and IoT architecture

3 Conclusion

Blockchain and IoT technologies can help us to build a trusted, self-organized, open and ecological IP protection system, which can involve all different parties in the IP protection and trade procedures, and even they may not trust each other.