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# Robust Decentralized Proof of Location for Blockchain Energy Applications Using Game Theory and Random Selection

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## Abstract

To combat the problem of illegal access to a service, several location proof strategies have been proposed in the literature. In blockchain-based decentralized applications, transactions can be issued by IoT nodes or other automated smart devices. Key pair encryption and private key signing have been defined mainly for human identification in blockchain applications, where users are personally and responsibly concerned about the confidentiality of their private key. These methods are not suitable for computing nodes whose private key is implemented in the software they run. Ensuring that transactions are issued by a legitimate sender with the proper credentials is a bigger concern in applications with financial stakes. This is the case with blockchain energy trading platforms, where