

Management of Geospatial Data using Blockchain

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Abstract: *The data generated all over the world is ever increasing. With this increase, the need to secure and regulate the use of data has become necessity. This can be achieved using blockchain. In case of geospatial data, which is of very large size and mostly unaltered once generated, storing it on blockchain is a challenging task. Storing it on-chain is practically not feasible as of now but storing actual off-chain and just storing metadata on the blockchain is the most practical & feasible solution available currently. To store large amount of data and at the same time provide the efficient & permission-based access to it, we have proposed a solution. Our solution will maintain a record of authorized nodes and the blockchain of metadata of large geospatial data. To provide an efficient querybased access, we will use MongoDB to store the pointer to the nodes in the blockchain to directly access the block. The storage of just metadata on the blockchain will reduce the complete blockchain size considerably. This model provides both the efficient & secure large scale storage while providing the efficient query & access mechanism at the same time. Also, we will use graphical way to grant permission.*

Keywords: Managing Geospatial Data, Mining, Cryptography, Scalability, Decentralized Community.

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