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IPFS-tiny in orbit – Enabling new concepts

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IPFS has proved itself to be a secure & scalable distributed file system which utilizes a smart data model, IPLD. IPLD defines data to be self-descriptive and self-verifiable, allowing you to receive them in a trustless way. Considering distributed ground station networks to be the future, this data model greatly serves satellite communications in this context. A satellite transmitting data that comply with the IPLD specifications can carelessly provide information to unknown / malicious ground stations, knowing that they cannot edit & broadcast false data. This is a key point to scaling ground station networks while maintaining security towards open data.

In Libre Space Foundation, we're making an effort in bringing IPFS closer to embedded systems and space applications. Our project, ipfs-tiny, is our open-source solution to this problem. It is still under development, and we are going to cover the main characteristics of this implementation as well as the major difficulties related to it.

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