

This thesis presents a detailed explanation and argumentation of why modern decentralized technologies could be utilized in order to improve scholarly communication on many fronts.

The current model of scholarly communication, which is dominated by scientific journals, is analysed together with the current economic models in use. The thesis also briefly investigates peer reviews. It also endeavors to explain how scholarly goods might be perceived from an economic standpoint.

Blockchain technology offers functionalities that could potentially solve many problems associated with scholarly communication through decentralization. Both permissioned and permissionless blockchains, their implementations, interesting technical/economic/governance aspects and why they are such a unique match for scholarly needs are thoroughly analyzed and explained.

Finally minimal viability criteria suitable for assessment of decentralized scholarly projects are proposed. Existing decentralized applications which try to migrate scholarly communication from a current centralized system to a decentralized one are described and examined through the prism of this framework.