Workshop NFDI @ JCDL 2022:

Decentralized Storage for Digital Preservation

Organization:
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Abstract:
Research in the humanities is undergoing a transformation towards the ubiquitous use of digital data, methods and tools. Digitized objects from the memory institutions (libraries, archives, museums) are the indispensable ground and raw material for every investigation. The sustainable, permanent and secure storage of this kind of research data represents a critical point from an infrastructural point of view. In this domain, particular challenges lie in the open-ended provision of immutable digitization data (e.g., through generic APIs) and variable layers of annotative information (e.g., in an IIIF scenario). Increasingly, cloud computing is enhancing availability and redundancy, while traditional self-hosting by individual institutions may become less important as it comes with several problems: Though rather, these institutions may still be closed down, become censored, lack the necessary money, lose their technical competence or simply discontinue their commitment to the provision of data and services. This workshop will compare the traditional, centralized or distributed approach with the novel decentralized approach based on criteria such as security, reliability, authenticity, immutability, naming, trustability, and cost in a comparison. The goal is to show in which cases a decentralized storage concept based on the peer-to-peer method is suitable for the sustainable storage and long-term operation of digital data and services and therefore the challenges prevailing in practice today or the weaknesses of the central storage concept can be solved. In doing so, the workshop will also help to examine whether the business model behind the decentralized storage concept, namely, whoever has unused local storage should be able to rent it to other community members or trade it with other users to add welcome redundancy to their own backup copies, can be considered for financing the long-term operation of digital research data, artifacts and services. In doing so, participants will identify benefits and problems across disciplines, among others, to help them understand this decentralized peer-to-peer storage approach linked to the incentive mechanics of open source cryptocurrency and digital payment systems.