

Spatial Web

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Our work at TLU BFM

- <https://publicvalueofdata.tlu.ee/>
- <https://www.exu.tlu.ee/mint-klaster>
 - We carry out network analysis on how value is created in CCIs
 - We develop new linked data systems for media and cultural institutions
 - We study existing blockchain-based data systems for audiovisual industries
 - We develop new blockchain-based data systems
 - We cannot avoid 'Spatial Web' anymore.



Introduction to the Spatial Web

- Evolution from Web 1.0 to Web 3.0
 - 🥁 Not just Web3
- Information becomes spatial, interlinked and thus contextual
- Meaningfully linked virtual and physical realities
 - Continuities between AR, VR and all the various 'metaverses'.
- Expectation: Natural and intuitive interaction with information
- Decentralised data control, management and trade



Integration of Digital and Physical Worlds

- 5G networks, sensors and robots embedded in environments
- AI filling the blanks
- Decentralized computing and storage
- Trustworthy, secure, and fast relationships
- Linked data standards
- Base layer Digital Twin architectures important pre-requisites for novel services.



Blockchains and the Spatial Web

- Coordinating value creation – cutting out rent-seeking intermediaries
- Ensuring value reaches creators
- Distributed Ledger technologies for reliable data verification



Standardisation

- W3C <https://www.w3.org/>
- Spatial Web Foundation <https://spatialwebfoundation.org/>
- Metaverse Standards Forum <https://metaverse-standards.org/>
- Ontochain <https://ontochain.ngi.eu/>



Spatial Web Foundation Principles

- Spatiality: dimensionalized and spatialized digital content
- Ownership: user control of data and digital property
- Security: secure data collection, transmission, and storage
- Privacy: cryptographically-secured digital identity
- Trust: reliable real-time validation of users, assets, and spaces
- Interoperability: seamless navigation and asset transfer across spaces



In Estonia

- First: realisation that Web 3.0/Spatial Web is coming – major new innovation wave
- Innovation wave – mainly for the CCIs
- Strong support for decentralisation solutions – risk for the privatisation and commodification of public spaces and private lives
- Multipurpose Digital Twin and open sharing of rich spatial data
- Faster development of 5G networks



Thank you!

