

CSE 424

Self Sovereign Identity Based E-Petition

Presenter

Tahir Emre Semiz

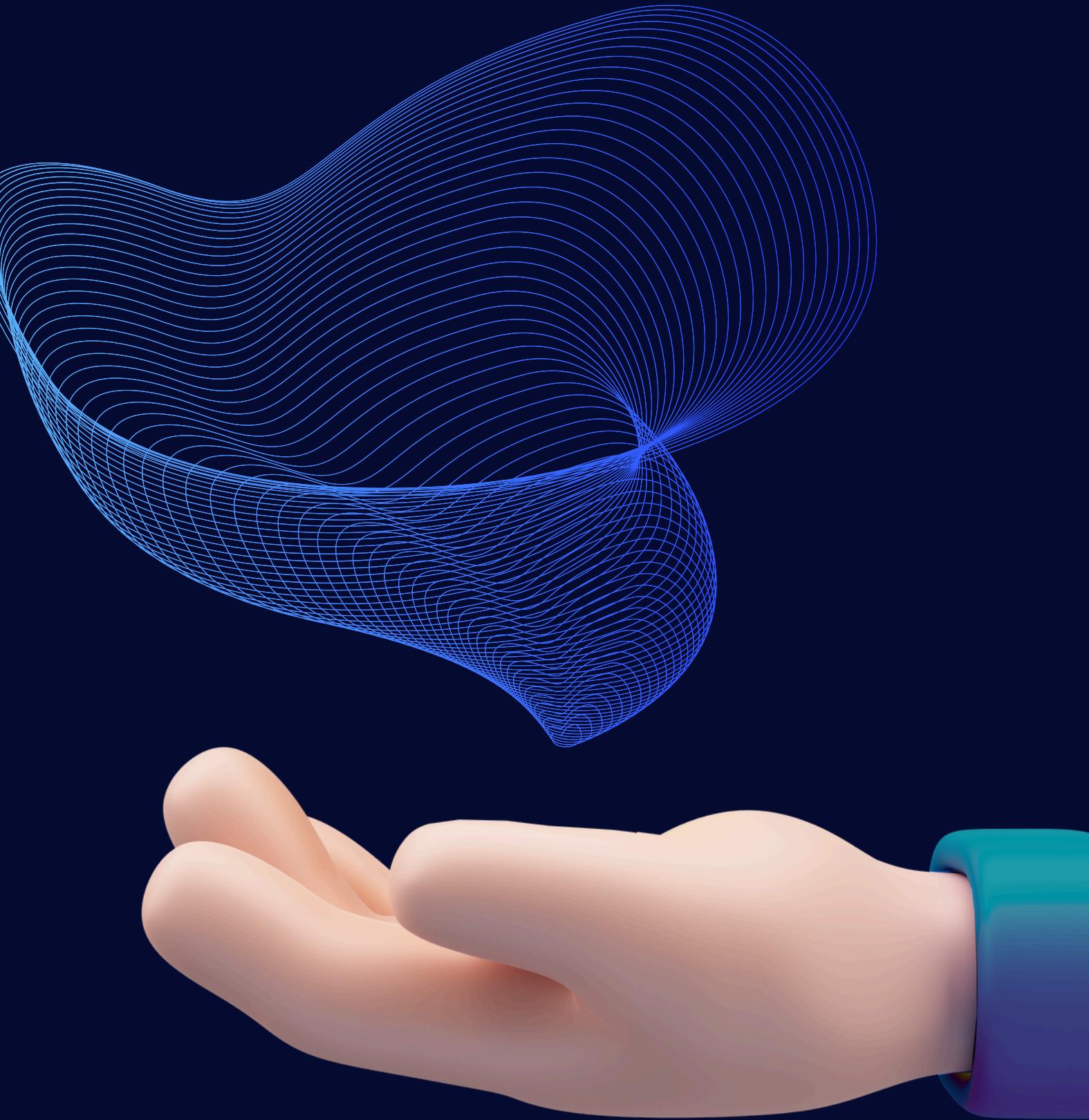
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Problem Identification

- The centralised nature of traditional identity management systems carries serious risks in terms of data security.
- These systems require the collection of personal data under the control of a centralised authority and become vulnerable to data breaches.



Complex Authentication Processes

- Current authentication processes used in online participation platforms are often complex and time-consuming.
- This complexity makes it difficult or reduces the participation of participants in online campaigns or petitions.



Self-Sovereign Identity Solution

- Self-sovereign identity empowers individuals to manage their digital identities outside the control of a central authority.
- This approach enables individuals to protect and control their identities more securely.



Online Participation with Self-Sovereign Identity

- The e-petition system protects and secures participants' digital identities by adopting the principles of self-sovereign identity.
- This system encourages increased online participation and ensures that participants have a secure and user-friendly experience.



Limitations of Centralized E-Petition Systems

- Data Security Risks: Vulnerable to cyber-attacks which can compromise the integrity of petitions.
- Access Restrictions: Government or platform control can limit public access, affecting participation.
- Lack of Transparency: Operations and data handling are not openly available, leading to potential mistrust among users.



Decentralized E-Petition System

- Censorship Resistance: No single point of control, making it difficult to alter or delete petitions arbitrarily.
- Enhanced Data Security: Utilizes cryptography to safeguard data against unauthorized access and breaches.
- Increased Transparency and Trust: Every transaction is recorded on a blockchain, visible and verifiable by all.



Benefits and Implementation of SSI in E-Petitions

- Selective Disclosure: Users can control which personal data to share without revealing unnecessary information.
- Independent Verification: Identities are verified through cryptographic proofs, reducing reliance on central authorities.
- Empowered Users: Individuals manage their identity directly, increasing security and personal data autonomy.

