

## Revisiting Usefulness of Centralized System for Establishing Trust

Shigeya Suzuki  
Keio University / WIDE Project

## Bootstrapping Trust by decentralized governance

- We propose a way to flexibly bootstrapping Trust on a distributed/ decentralized system based on the root of trust operated with reasonably decentralized governance — DNS/DNSSEC based system

## Decentralization and Reality

- There are tons of Hypes on “web3” or whatever
- **Proponents believe that decentralization can solve problems in centralization, especially on “Trust.”**
- **In reality, identifying a person to digital identity without relying on some trusted third party is a challenging problem**
- If most or “all” of activities closed into a cyber world, it is possible, but as we physically presented as human beings, **we often need to bind digital identities to us**

## Minimize dependence on Centralized System

- As the workshop name suggests, it is a challenging problem.
- If it is (almost) impossible to create a decentralized system, then how can we minimize the dependence?

## Governance of each of the Zones

- Each of the DNS Zone’s name management is under the policy of Zone Management, which the owner of the Zone governs
- The Zone’s governance is also depending on the upper hierarchy (towards the root)
- The root is managed by ICANN, which is reasonably governed by a decentralized governance model developed in the last 20+ years
- By trusting a specific zone, each entity that trusts the specific zone can establish trust between them
  - This can be achieved by trusting the root DNS zone (operated under ICANN policy) and configuring the specific zone name

## Structure of the Paper

- The paper provides background on how we use a centralized system by revisiting how it works and how to use it.
- Firstly, we review what so-called “Centralized Trust” is currently in use
- Secondly, present a scheme based on DNS as a basis for establishing Trust

## References

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- [3] Research Report of JFSA Multilateral Joint Research on the Chain of Trust of Decentralized Finance, Joint Research of QUNIE Corporation and Japan Financial Services Agency, June 2022,