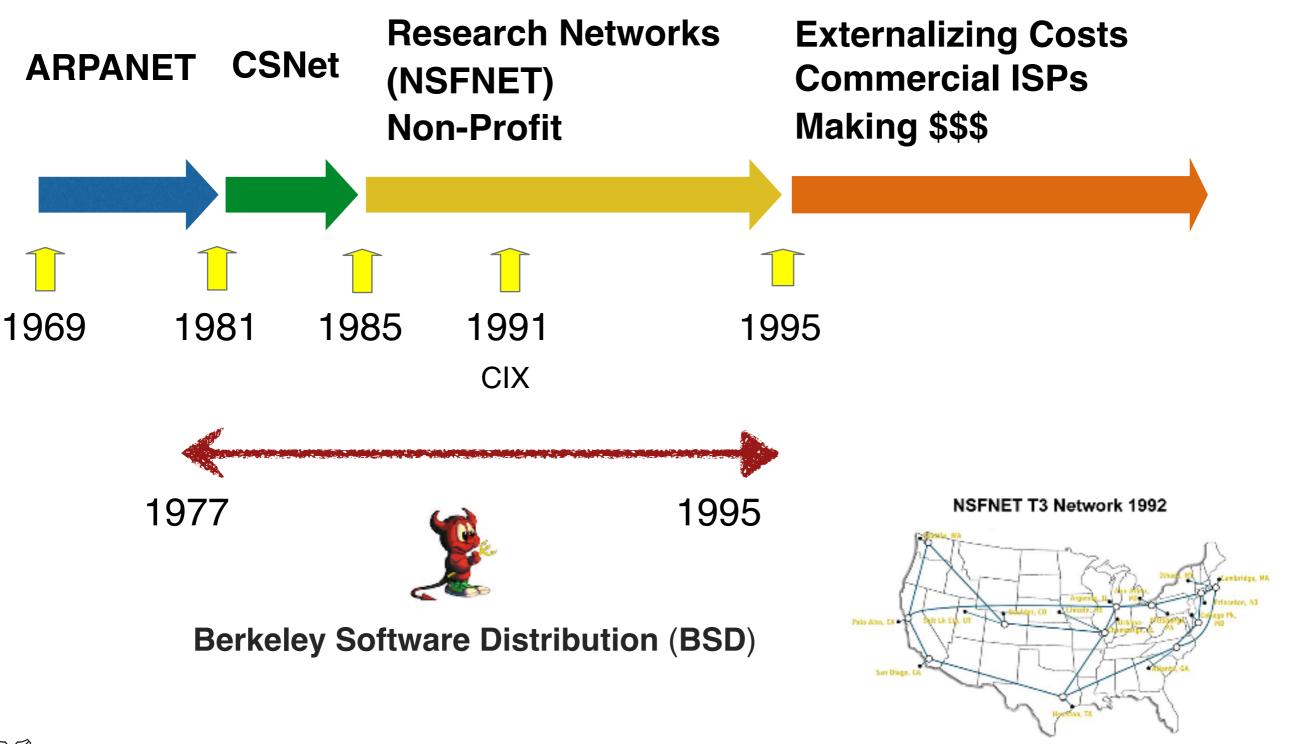
### Introduction to BSafe.Network

### Shigeya Suzuki, Ph.D

Associate Director, Technology Officer, Blockchain Laboratory, Keio Research Institute at SFC Project Associate Professor, Graduate School of Media and Governance, Keio University <a href="mailto:shigeya@wide.ad.jp">shigeya@wide.ad.jp</a>



### **Evolution of the Internet**

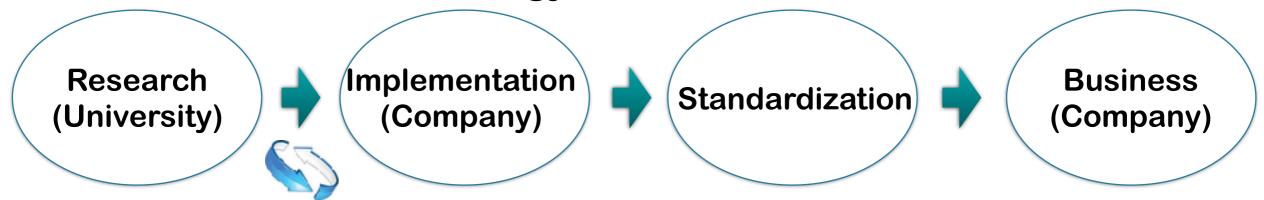




© Shigeya Suzuki

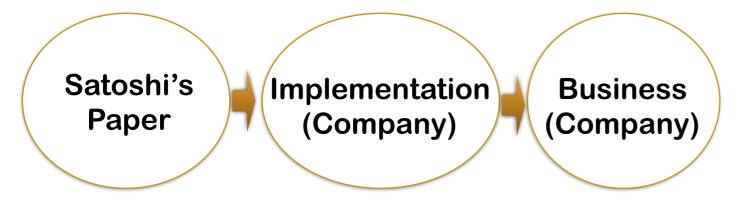
### Academic Research for the rescue

#### The Case of Internet Technology



"BSD" and open-source facilitated innovation

#### The Case of Bitcoin and Blockchain



Business motivated Innovation







© Shigeya Suzuki

## BSafe.network: Plays the same role as NSFNet and BSD



- A neutral, stable and sustainable research test network for Blockchain technology by international universities.
- Founded by Shinichiro Matsuo and Pindar Wong in March 2016.
  Each university becomes a blockchain node.
- Research on Blockchain and its applications
  - Not limited to Security. All aspects will be researched.



- Neutral platform
- de-anchored trust of Blockchain network
- More nodes (with Neutrality)
- Testbed for academic research



## 23 International Universities Have Already Join and More to come..







### To be part of the network..

- Check the site: https://bsafe.network
- Please drop an email to info@bsafe.network or shigeya



# Layer 2 Competition by BSafe.Network





### Layer 2 Competition for Blockchain

#### Two categories of competitions

### Layer 2 Protocol Proposal

New protocol and implementation of Layer 2 technology to enhance scalability, privacy and security, and their trade-offs

#### Layer 2 Measurement method and tool

Measurement mechanisms

Standard dataset for evaluation





### Goal of Layer 2 Competition

### Provide neutral evaluation results from experiment and reviews by experts

- 1) Collecting attack model on layer 2 network,
- 2) Building measurement of security and performance of layer 2 technology
- 3) Finding better and best realization

Not selecting something, but provide academia backed data and research results to public

#### Outcome to public

Program codes: cc-by license

Evaluation software/platform Layer 2 software

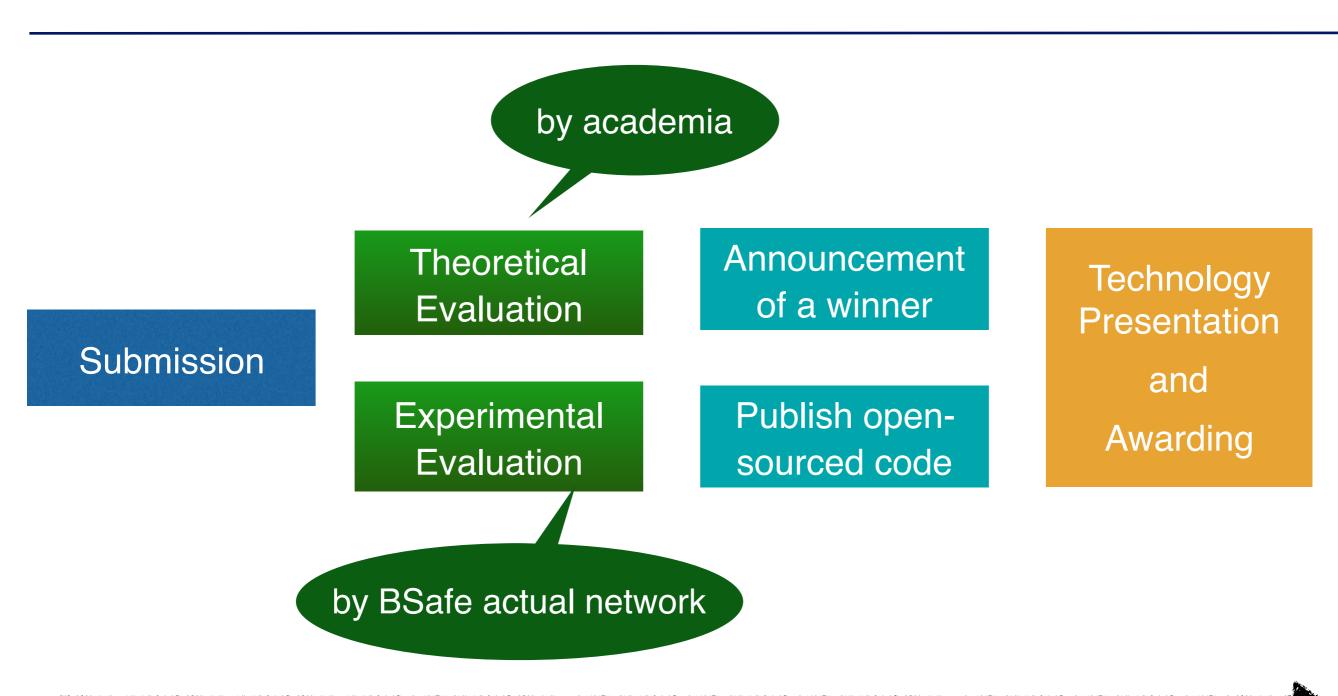
#### **Byproduct**

Security testing theory and tools for Layer 2 technology



Data for Evaluation

### Overview of the Competition





### **Evaluation Criteria**

#### 1.Performance

Number of transactions / sec Diversity of countries Network latency

#### 2.Security/trust

Resistance to fault/crash/attack to nodes How decentralized DoS attack to make layer 2 transaction fail Scenario and data set to evaluate Availability of layer 2 nodes

#### 3. Other



### Schedule

Submission

Theoretical Evaluation

Announcement of a winner

Presentation and

Awarding

Technology

Experimental Evaluation

Publish opensourced code

February 28, May 31, June 2018 2018

Summer 2018



© Shigeya Suzuki, 2018

### Call for Participation and award

#### How to join

Technical documents which explains design rationale, exact algorithm and protocols, self evaluation in security and efficiency

**Program Codes** 

Details will be announced at the end of November

#### **B-Prize**

Prize for a winner and great technology

