

# chainify.org

SWISS BLOCKCHAIN HACKATHON  
TRUST SQUARE

Zürich

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**MAIN EVENT PARTNER**



# solution description

We have implemented a **vote casting mechanism** that consists of

- ❑ mobile application with **face recognition** functionality (Amazon Recognition Service), **eligibility checks** functionality
- ❑ SQL-like abstraction over blockchain to secure auditability and transparency
- ❑ backend deployed on AWS

# code and documentation

## **Android application .apk file URL:**

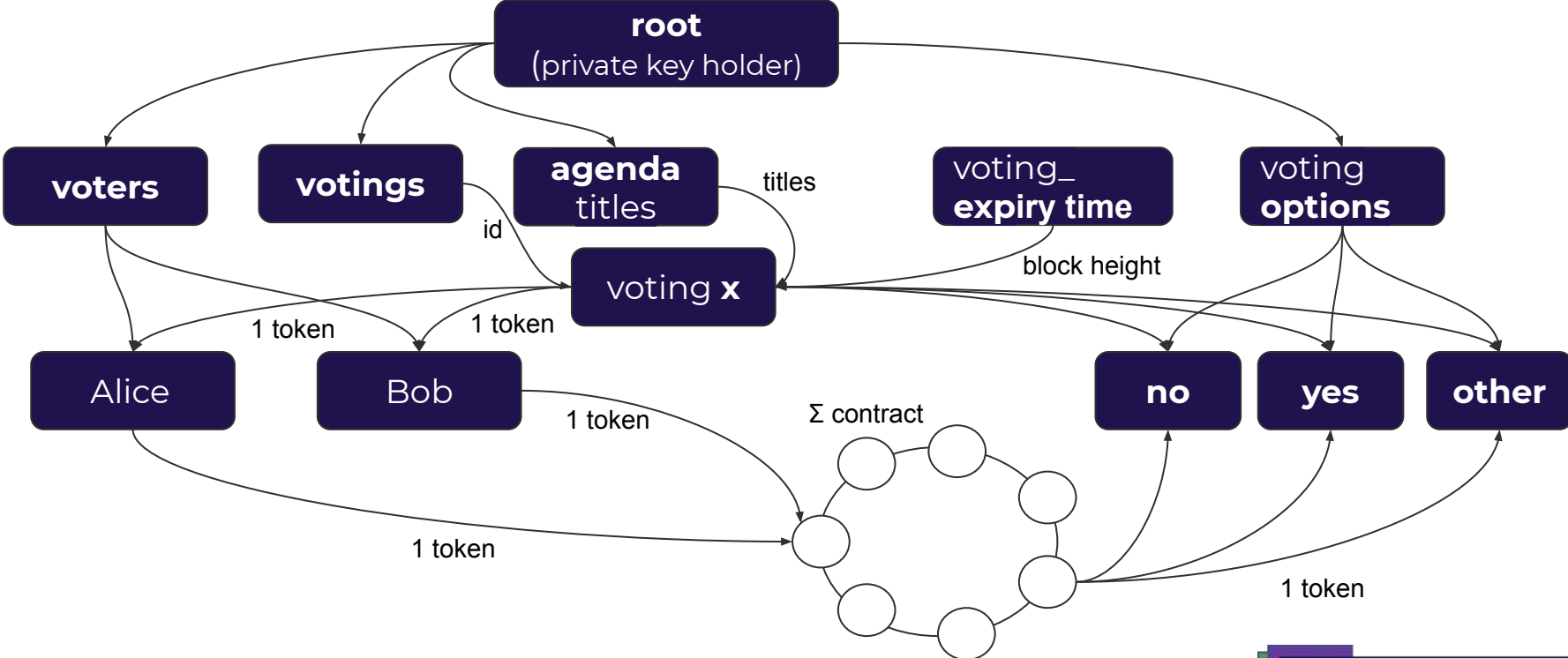
<https://drive.google.com/file/d/1ti2gILnCYbJ-A1vhJUVcqQDAV1tbQC2B/view?usp=sharing>

## **Github repositories:**

Android mobile application for citizens to vote:  
<https://github.com/sbhack2019/android-app>

**Backend** for interaction with Waves blockchain and Face recognition, deployed to AWS ( using EC2 instance, AWS Rekognition, AWS RDS):  
<https://github.com/sbhack2019>

# solution architecture



MixNet mechanism

# voting requirements fulfillment

requirement:	Chainify solution:	status:
auditability	open source code+pub blockchain	done
ballot privacy	smart contract → zero knowledge	done, partially*
cast vote as intended	blockchain (incl. digital signatures)	done
vote recorded as cast		
vote counted as cast		
free receipt	voter has no access to transactions	done

\*Mixnet mechanism not implemented yet