

Politecnico di Torino – University of Plymouth
III Facoltà di Ingegneria dell'Informazione
Laurea Magistrale in Ingegneria del cinema e dei mezzi di comunicazione

BlockArt: A Blockchain dapp for collaborative artistic production

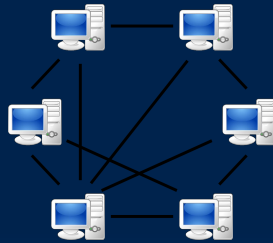


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Co-rapporteur: Gianni Corino, University of Plymouth
Co-rapporteur: Valentina Gatteschi, Politecnico di Torino

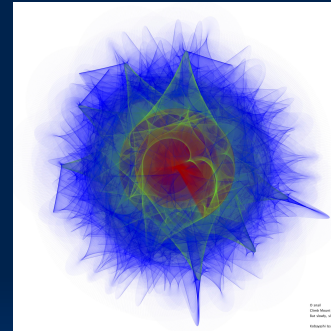
Candidate: Davide Grimaldi

Context

- Decentralized View
- How can decentralized view improve art?



Blockchain



Goals

- Facilitate artists in the realization of works of participatory art
- Develop an algorithm able to increase the participation of users of the platform
- Create a decentralized platform for participatory artistic productions.



Features

- Members
 - Authors
 - Voters
 - Mediators
 - and...



Features

- Members
 - Alpha Artist



Features

- Members
- Reputation
- Ownership



Main Steps

- Publishing of draft



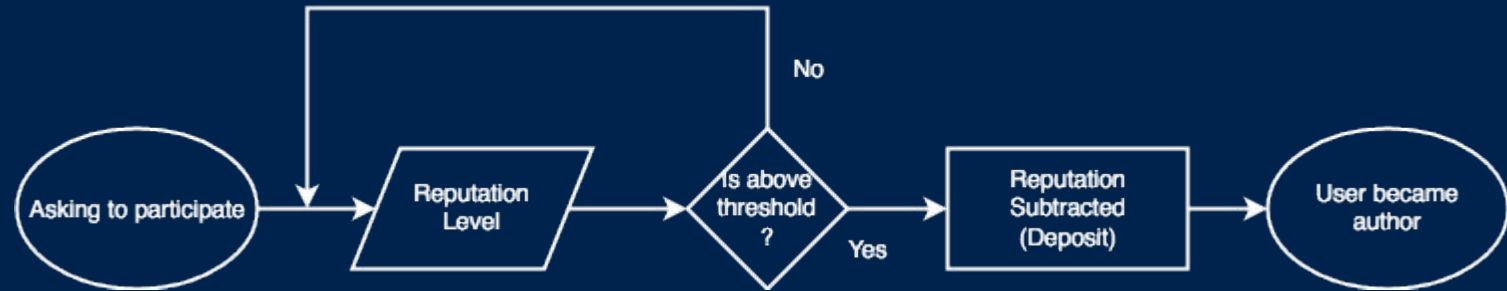
Main Steps

- Publishing of draft
- Participation



Main Steps

- Participation



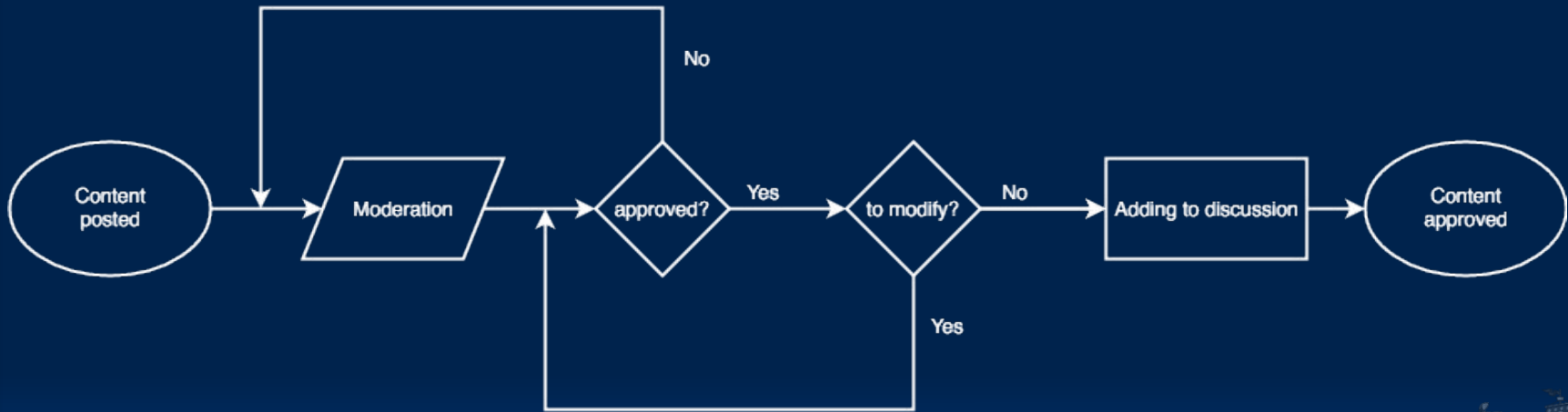
Main Steps

- Publishing of draft
- Participation
- Moderation



Main Steps

- Moderation



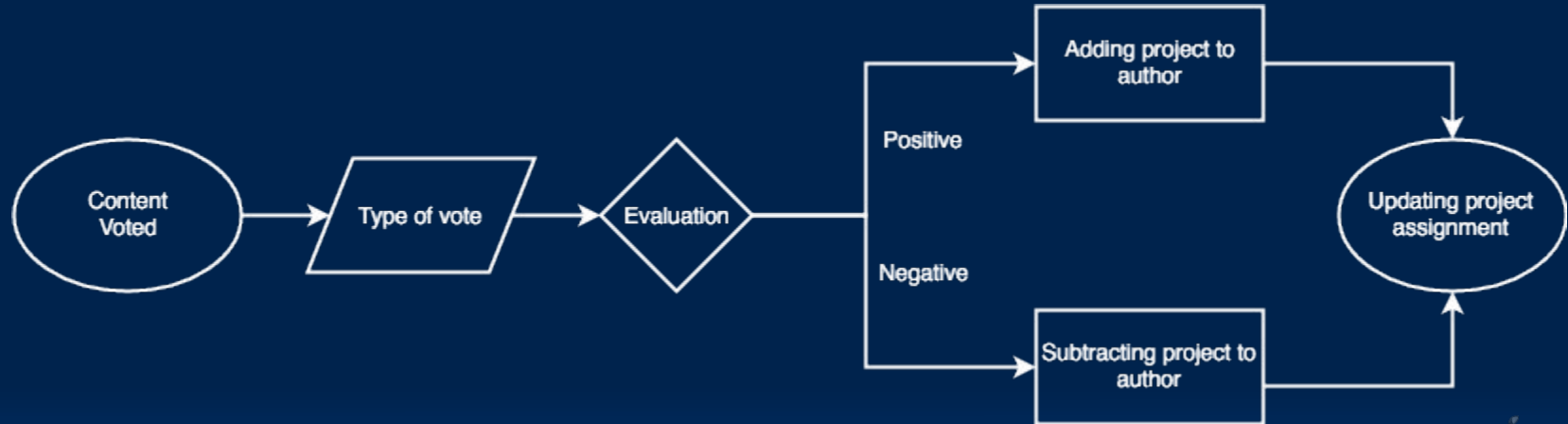
Main Steps

- Publishing of draft
- Participation
- Moderation
- Voting



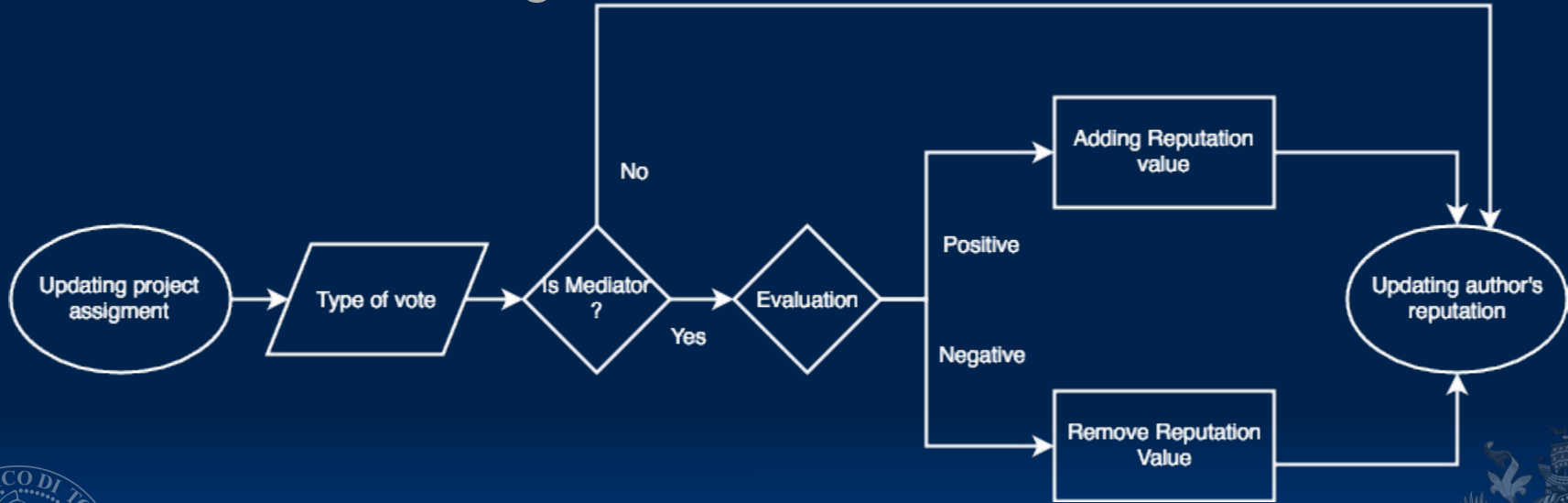
Main Steps

- Voting



Main Steps

- Moderator Voting



Algorithms

- Reputation algorithm
- Distribution of ownership



Algorithms

- Reputation algorithm

$$Beta(\alpha', \beta') = \begin{cases} Beta(u * \alpha + 1, u * \beta) & \text{if Negative evaluation} \\ Beta(u * \alpha, u * \beta + 1) & \text{if Positive evaluation} \end{cases}$$

$$E|Beta(\alpha, \beta)| = \frac{\alpha}{\alpha + \beta}$$

Trustworthy	if	$E Beta(\alpha, \beta) \leq t$
Not trustworthy	if	$E Beta(\alpha, \beta) > t$



Algorithms

- Distribution of ownership

$$\left\{ \begin{array}{ll} 100 \frac{\sum_{i=1}^n V^+ - \sum_{i=1}^n V^-}{\sum_{i=1}^n n^+} & \text{if } \sum_{i=1}^n V^+ \geq \sum_{i=1}^n V^- \\ 0 & \text{otherwise} \end{array} \right\}$$



DAO



Welcome to BlockArt

Davide

0x8f002fd2e41d640024dadb5795e9cf213bcb45e1

If it doesn't correspond with your BlockArt address, please check it in
MetaMask

Sign in

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Smart Contracts



Welcome to BlockArt

Davide

0x8f002fd2e41d640024dadb5795e9cf213bcb45e1

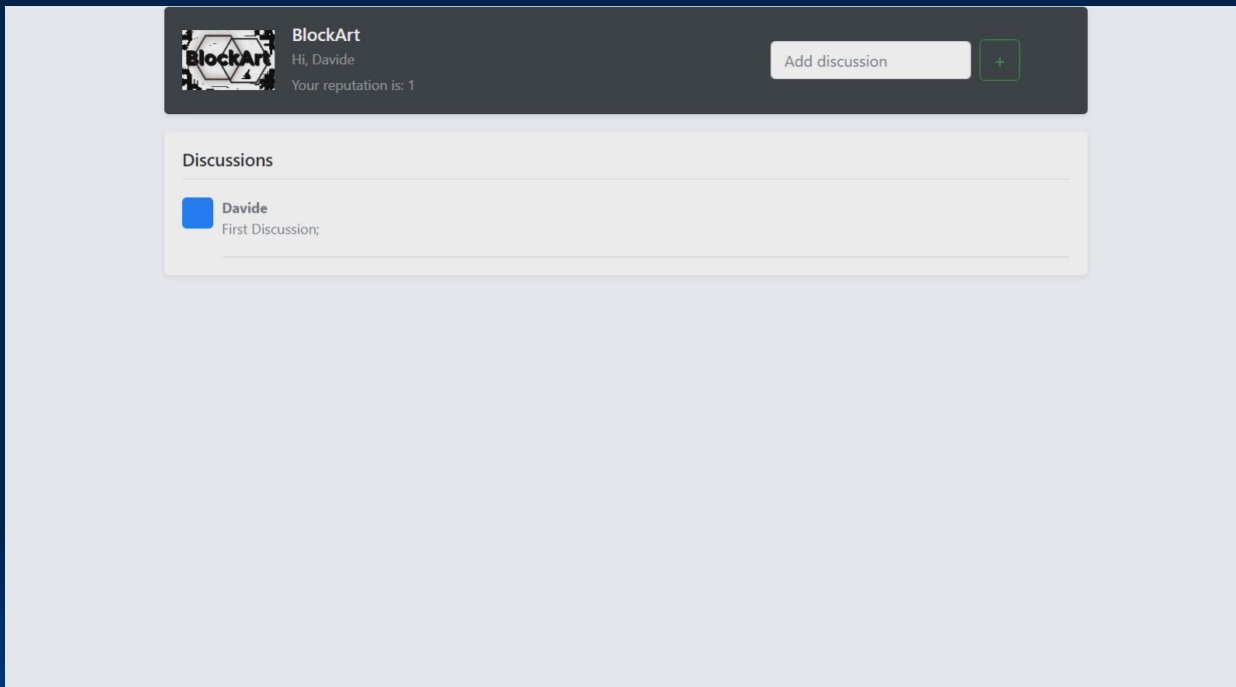
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Smart Contracts



Smart Contracts

First Discussion

First Comment

First comment of first discussion

Davide

Explore

Suggestions

Like 0


UnLike 0

Add Comment


Title

Add the content

Add



POLITECNICO DI TORINO
1859 1906



PROGATE FINITE INVENIT

Smart Contracts

Second Comment



Mario

Second comment of first discussion

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Like 1

UnLike 0

Add Comment

Title

Add the content

Add

The Participant are: Davide (50) Mario (50)



Innovative Idea



Conclusion

BlockArt process has been shown with a practical example, which illustrates that the blockchain-based framework is feasible.



An innovative idea that shows experimentation of decentralized technologies could be an advantage to optimize collaborative communities.

Thanks!

Q

A

