

Title – Proposal: Allocation of 10% of Gas Fees for Health Insurance Claims

Abstract

- This Arbitrum Improvement Proposal (AIP) seeks to allocate 10% of all transaction fees to a contract designed for health insurance claims. This proposal will increase user engagement and expand the blockchain's real-world application.

Motivation

- This proposal uses the Arbitrum blockchain technology to securely and transparently manage and distribute health insurance claim funds. It's alarming that approximately 21.5% of the world's population lacks access to any form of health insurance, and this is particularly concerning in Nigeria, where only 3.4% of citizens are insured. While the percentage of insured individuals is higher in India at 55%, it's worth noting that both Nigeria and India have the highest percentage of crypto users globally, with 34.3% and 29.9% of their populations owning crypto, respectively.

(above examples are case studies)

Rationale - Arbitrum's mission is to make Ethereum accessible to more people through a secure, scalable, and user-friendly platform. To enhance the benefits of this platform, we propose implementing an AIP that directs a portion of transaction fees towards a cause that directly impacts users' lives. This will encourage engagement and align to create a fair, user-focused blockchain ecosystem.

Key Terms

1. Healthcare provider: This includes hospitals, clinics, and pharmacies.
2. Health insurance claim: This is a request made to a smart contract to pay a specific amount to a particular healthcare provider.
3. Health insurance premium: A percentage (e.g., 10%) of a user's transaction fee deducted and paid later as a claim.
4. DAO: A decentralized autonomous organization responsible for adding or removing a Health Institution.

Key Considerations

- Implementation must not require changes to the protocol
- Insurance claims must be transparent and anonymous
- Monthly claims should be between \$5 - \$1000 per user
- A healthcare provider can only join or be removed through voting.
- Funds must be paid to only approved Health Institutions

Specifications

This AIP will upgrade the existing ARB token at address 0x912ce59144191c1204e64559fe8253a0e49e6548. The upgrade will redirect 10% of all transaction fees to a designated multi-sig wallet.

Steps to Implement

1. Development & Testing of the Health Insurance smart contract
2. Selection of key holders to manage the Multi-sig account from the Arbitrum Foundation
3. Development of a dApp to manage the whole system:
4. Upgrade the ARB token contract to divert 10% of transaction fees to the upgradable insurance smart contract:
5. Onboarding Health Institutions
6. Test the new system in a testnet environment:
7. Deploy to the Mainnet:
8. Educate the community about the new feature and how to use it

Timeline:

Planning & Research

- Estimated duration: 1 month

Development Stage

- Estimated duration: 2 months

ARB Token Upgrade Stage

- Estimated duration: 2 weeks

Hospital and Health Institutions Onboarding Stage

- Estimated duration: 1 month

Testing Stage

- Estimated duration: 2 months

Auditing Stage

- Estimated duration: 2 months

Deployment Stage

- Estimated duration: 1 week

Conclusion & Community Education Stage

- Ongoing

Total Months: 6 Months (some activities will run concurrently)

Overall Cost

Smart Contract Development - \$10k

dApp Development - \$20k

Auditing - \$10k

Contingency & Infrastructure- \$30k

Marketing & Onboarding Health Institutions Worldwide - \$50k

Total Cost - \$120k

Technical details

10% of transaction fees go into an insurance contract as a premium via the `payPremium(address beneficiary, uint256 amount)`

function.

The insurance contract records a detailed map of each user's address and the corresponding amount of premium accumulated, using the mapping(`address => uint256`) `_premium`

.

Users can donate their premium as a charitable contribution to their healthcare institution or other recipients by claiming with the beneficiary's address, amount, and healthcare address via the `claim(address beneficiary, uint256 amount, address healthcare)`

function.

Possible Problems with Implementation

- A lower incentive to validators
- Increase gas fee
- Change in the protocol (undesirable)
- Crypto is illegal in some places