Antitoken

Entangled Tokenomics for DeSci

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Mission

$ANTI and $PRO are an experimental entangled token pair designed to explore new frontiers in decentralised market-making by introducing a system capable of encoding both predictable and unpredictable outcomes into its tokenomics. This approach challenges traditional continuous AMMs by employing a discretised mechanism where market dynamics are shaped by the interaction between the two tokens. Beyond their memetic origins, $ANTI and $PRO have potential use cases in decentralised science (DeSci), where such a system could underpin prediction markets for scientific research. By embedding structured uncertainty and dynamic equilibria into their design, these tokens offer a novel framework for creating markets that balance stability with probabilistic behavior, enabling a more nuanced approach to decentralised economies.

Technology

The $ANTI – $PRO token pair emerged as a bold experiment in tokenomics, exploring the potential of a system based on entangled market dynamics. Unlike traditional decentralised market-making, which relies on continuous automated market makers (AMMs) in individual pools, $ANTI and $PRO introduced a discretised AMM model where market-making occurs through paired interaction. Launched with an initial issuance of 0.1 SOL split asymmetrically between $ANTI (0.045 SOL) and $PRO (0.055 SOL), this system was designed to inherit a natural Delta (Δ), creating a dynamic from the outset. This asymmetry, combined with the social entanglement of the pair, led to emergent behaviors like parity maintenance and rewards optimised for holding both tokens. Rather than rely solely on theoretical modeling, the project embraced the memetic nature of cryptocurrency markets to test its viability in real-time. To expand the experiment, a custom AMM-like mechanism called the Catalyst contract will be

introduced to bind $ANTI and $PRO, giving rise to two new tokens: Emission (X) and Radiation (Y). Governed by tunable functions WAGMI() and NGMI(), these tokens encapsulate different dynamics: Emission is predictable and derived from the sum ($N_{ANTI} + N_{PRO}$), while Radiation is probabilistic and reacts to the difference ($N_{ANTI} - N_{PRO}$). This combination of deterministic and indeterministic outputs creates an environment of unique market interactions, where equilibria may form dynamically. The introduction of fluidity and randomness in the Radiation token presents an opportunity to observe how markets respond to unpredictable, yet systematically integrated, behaviors. While $ANTI and $PRO began as a memetokenomics experiment, their underlying mechanisms hint at significant potential applications, particularly in decentralised science (DeSci). In DeSci, systems frequently encode dualities, such as consistent and inconsistent components in a hypothesis. The Catalyst system could model these through Emission and Radiation tokens, enabling prediction markets for scientific validation or exploration. Beyond DeSci, the $ANTI – $PRO ecosystem has potential applications in DAOs, governance systems, and decentralised financial platforms where opposing yet interconnected forces — such as support vs. dissent or risk vs. reward — can be encoded directly into token mechanics. This whitepaper delves into these use cases and outlines a roadmap for exploring the broader implications of $ANTI and $PRO in decentralised systems.

Quantum Binding

Similar to general principles in quantum mechanics, each $ANTI and $PRO token is quantified by a wave function ψ_{ANTI} and ψ_{PRO} respectively. The Catalyst operates on these wave functions such that:

$$N_X\psi_X = F(N_{ANTI}\psi_{ANTI} + N_{PRO}\psi_{PRO}), \text{ and}$$

$$N_Y\psi_Y = G(N_{ANTI}\psi_{ANTI} - N_{PRO}\psi_{PRO}), \quad (1)$$

to yield the number of released ψ_X and ψ_Y tokens (N_X and N_Y respectively), where $F(a)$ and $G(b)$ are operations on their arguments a and b. F and G operations are tune-able actions on the deposited quanta of tokens and act as a control agent for the Catalyst. The above expression can be inverted to derive the inverse relation such that:

$$N_{ANTI}\psi_{ANTI} = F^{-1}(N_X\psi_X)/2 + G^{-1}(N_Y\psi_Y)/2, \text{ and}$$

$$N_{PRO}\psi_{PRO} = F^{-1}(N_X\psi_X)/2 - G^{-1}(N_Y\psi_Y)/2. \quad (2)$$

The forward (1) and inverse (2) operations to deposit and withdraw tokens are determined by F, G, F^{-1} and G^{-1}. The forward operation requires depositing $ANTI and $PRO tokens to emit $X and $Y. The inverse operation requires depositing $X and $Y tokens to emit $ANTI and $PRO. These operations are best visualised in terms of the Feynmann diagram-like schema as shown in Figure

1.

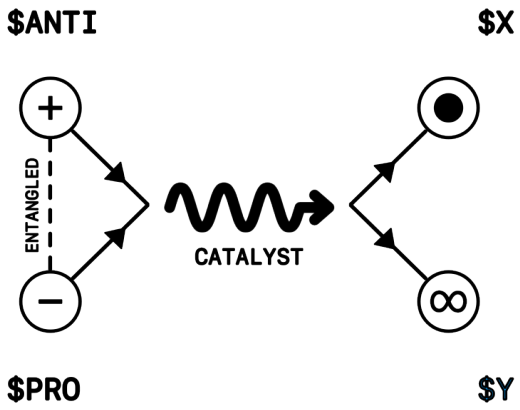

Figure 1: Concept