

JPEG: A Social Game Integrating Photo Sharing, Prediction Markets, and User-Generated Content (Version 2.0)

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Abstract

Billions of JPEGs are taken every day. What if taking one could make you money? JPEG is a social prediction game blending BeReal-style photo sharing with a prediction market, powered by Base, an Ethereum Layer 2. Users submit photos for daily themes, earning 100 pixels (PX) per submission, while others “collect” them to bet on the day’s winner, with earlier collects yielding more shares but carrying higher risk. Collects fuel a prize pool, creators earn 20% royalties, and the most popular photo wins crypto rewards. Beyond daily themes, users can create freestyle JPEGs with set scarcity and prices, tradable as assets, enabling influencer monetization. Inspired by Polymarket, JPEG introduces “True Social”—a concept where truth is backed by money, ensuring fair rewards through capital flows. It serves as a UGC engine for brands, fostering heuristic value around attention like MrBeast’s model. This whitepaper explores JPEG’s detailed mechanics, economic incentives, user psychology, novelty, and its potential as a viral, brand-driven platform, leveraging behavioral economics, game theory, and non-game enjoyment paradigms for clean, intuitive UI/UX.

1 Introduction

Billions of JPEGs are captured daily, yet their value remains largely untapped in the digital economy. What if taking one could earn you money? JPEG is a pioneering social game that transforms photo sharing into a dynamic prediction market, blending BeReal’s spontaneous creativity with robust financial incentives. Each day, users are presented with themed prompts—ranging from "Hydration" to "My Face When..."—and submit a single photo, earning 100 PX as an initial reward. Simultaneously, others “collect” these images by placing bets of 20 PX each, predicting which photo will win the day’s popularity contest. Earlier collects yield a higher share of the prize pool due to a time decay mechanism, introducing an element of strategic risk. This pool, funded by 80% of total collects, is distributed to winners, while creators receive 20% as royalties, creating a vibrant economy of creation and speculation. Beyond daily themes, users can craft freestyle JPEGs, setting their own scarcity (e.g., 1/100 limited editions) and pricing in PX or cryptocurrency, which become tradable assets on the platform. This enables influencers and artists to monetize their personal brand directly, with trading dynamics mirroring meme-based cryptocurrency markets.

The innovation of JPEG lies in its “True Social” concept, inspired by Polymarket’s capital-backed prediction model. In Polymarket, financial stakes aggregate collective wisdom, pricing outcomes as probabilities and rewarding accurate predictions.(1) Similarly, JPEG’s capital flows through collects reveal the “truth” of creative resonance: the most compelling photos rise to the top, ensuring fair rewards for contributors. This on-chain mechanism democratizes value creation in the internet’s creative space, transforming attention into heuristic worth—paralleling MrBeast’s entertainment-driven viral economics, where engagement fuels cultural impact.(2) As a user-generated content (UGC) engine, JPEG empowers brands like Nike to sponsor themed weeks (e.g., “Just Do It”), harnessing authentic user creativity for marketing campaigns.(3) The platform’s design places a serious emphasis on clean, intuitive UI/UX, ensuring a seamless experience that enhances user flow and retention, a priority for the upcoming V3 alpha release. This whitepaper, updated to Version 2.0 with insights from beta testing and market analysis, provides an in-depth exploration of JPEG’s design, tokenomics, user behavior, and its potential as a web-native engine for viral content, drawing from behavioral economics, game theory, and non-game enjoyment paradigms.

2 The Social Prediction Game

2.1 The Social Side: A Global Creative Canvas

Daily themes serve as a catalyst for user-generated content (UGC), prompting participants to capture unique moments—whether artistic snapshots, humorous takes, or poignant life scenes. This mirrors the ritualistic engagement of BeReal, but elevates it by transforming each photo into a cultural artifact with economic potential. As of October 2025, this has driven an impressive 220,000+ waitlist signups, reflecting a strong market pull and cultural resonance. The social layer fosters a global community where users inspire and compete, their creativity validated by collective participation.

2.2 The Prediction Game: Speculation Meets Intuition

The speculative dimension introduces a thrilling prediction market where users “collect” photos by betting 20 PX each, anticipating the day’s most popular submission. The time decay mechanism, defined as $\text{Shares} = px \cdot (1 - t)$ where px is the collect value and $t \in [0, 1]$ is normalized time over 24 hours, rewards early risk-takers with higher shares while penalizing late bets. This gamified layer, rigorously tested with 100 IRL beta users, has demonstrated a 10-15% engagement uplift through the introduction of quests and milestones.(6)

2.3 UGC Engine & Entertainment Value

JPEG stands as a robust UGC engine, converting passive photo-taking into an on-chain economic ecosystem. Brands such as Nike can sponsor themed weeks (e.g., “Just Do It”), leveraging user creativity for viral marketing campaigns that generate authentic content at scale. This model draws inspiration from MrBeast’s attention-heuristic approach, where entertainment value—amplified by high engagement—creates cultural and economic momentum.(2) Financial incentives, including 100 PX per submit and 20% royalties on collects, paired with transparent on-chain mechanics, ensure fair rewards. This alignment with Web3 principles fosters a system where attention drives heuristic value, rewarding contributors and setting JPEG apart within the \$666M 2025 SocialFi seed market.(4)

2.4 Novelty & UI/UX Emphasis

JPEG’s novelty emerges from its unique fusion of a daily ritualistic game, a prediction market, and a marketplace for tradable freestyle JPEGs, a combination unexplored within the \$3.4T

crypto market cap as of 2025.(5) The platform's UI/UX is a critical focus, with V3 alpha development prioritizing clean, intuitive and fun designs to enhance user flow. This emphasis ensures that both creators and speculators experience a seamless interface, encouraging prolonged engagement and creative output, a cornerstone of the platform's success.

3 Type of Users

3.1 User A: Content Creators

User A, akin to BeReal users, enjoys creative photo sharing and submits daily theme photos or freestyle JPEGs. They are motivated by intrinsic rewards (e.g., social validation (15)) and extrinsic royalties or direct sales, seeking self-expression and community engagement.

3.2 User B: Speculators

User B, often crypto enthusiasts or trend-spotters, predicts winning photos in themed collects or trades freestyle JPEGs as assets. Driven by financial gain and overconfidence bias (?), they aim to maximize returns through early collects or market trades.

3.3 User Evolution: A-to-B Transition

Royalties and freestyle JPEG sales enable User A to accumulate capital (pixels or crypto), transitioning into User B's speculative role. The endowment effect (16) suggests users overvalue earned assets, increasing speculation. This creates a cyclical economy of creation and trading.

4 Mathematical Modelling

4.1 Time Decay Mechanism

The time decay formula governs collect value for themed photos:

$$\text{Shares} = f(\text{px}, t), \quad (1)$$

where:

- px: Nominal value of a collect (e.g., 1 PX).
- t: Normalized time since posting, $t \in [0, 1]$ over 24 hours (e.g., $t = 0.5$ at 12 hours).
- Shares: Effective value of the collect in the prediction market.

A common implementation is $f(\text{px}, t) = \text{px} \cdot (1 - t)$, leveraging loss aversion (17) to encourage early collects. For example, a collect at $t = 0$ yields 1 share, but at $t = 0.5$, only 0.5 shares. An alternative exponential decay model,

$$f(\text{px}, t) = \text{px} \cdot e^{-kt}, \quad (2)$$

where k is a decay constant (e.g., $k = 0.1$), may smooth value decay, potentially increasing late collects by 15% based on simulations. Freestyle JPEGs are not subject to time decay, as their value is market-driven.

4.2 Prize Pool Distribution

The expected prize pool is:

$$\text{Prize Pool} = 0.8 \cdot N \cdot V \cdot \int_0^1 (1 - t) dt = 0.4 \cdot N \cdot V, \quad (3)$$

For $N = 2,000$, $V = 1$, the prize pool is 800 PX, with 200 PX distributed to creators. Simulations suggest exponential decay ($k = 0.1$) increases the prize pool by 10%.

Table 1: Royalty and Freestyle Revenue Example

Transaction	Creator Revenue	Prize Pool
100 themed collects at 1 PX	20 PX (20%)	80 PX (80%)
50 freestyle JPEGs at 10 PX	500 PX (direct)	—

5 Behavioral Economics and Human Psychology

5.1 Loss Aversion

Loss aversion, a core principle of prospect theory (17), posits that losses loom larger than equivalent gains in decision-making. In JPEG, the time decay mechanism for themed collects ($\text{Shares} = f(\text{px}, t)$) creates a sense of urgency, as users risk losing share value by delaying collects. This drives early participation, as users perceive late collects as a loss compared to maximum shares at $t = 0$. For freestyle JPEGs, scarcity (e.g., limited editions) amplifies perceived loss, encouraging rapid purchases to secure valuable assets.

5.2 Social Proof

Social proof, where individuals conform to others' actions under the assumption they reflect correct behavior (18), shapes JPEG's dynamics. Visible collect counts for themed photos and trading volumes for freestyle JPEGs signal popularity, influencing users to follow trends. This can amplify engagement but risks herd behavior, where users overlook niche content, reducing diversity in predictions and trades.

5.3 Endowment Effect

The endowment effect suggests people ascribe higher value to items they own (16). In JPEG, users overvalue earned PX from royalties or owned freestyle JPEGs, increasing their willingness to speculate as User B. This effect strengthens the A-to-B transition, as creators reinvest earnings into trading, perpetuating the platform's economic cycle.

5.4 Intrinsic vs. Extrinsic Motivation

Self-determination theory distinguishes intrinsic motivation (driven by internal satisfaction) from extrinsic motivation (driven by external rewards) (15). User A is intrinsically motivated by creative expression in themed and freestyle submissions, deriving joy from social validation. User B is extrinsically motivated by financial gains from collects and trading. JPEG's royalties and freestyle sales bridge these motivations, encouraging creators to stay engaged while pursuing profit, enhancing retention across user types.

5.5 Framing Effects

Framing effects occur when the presentation of information influences decisions (22). In JPEG, the wording of daily themes (e.g., "Round" vs. "Boy Dinner") shapes submission quality and quantity. Vague and subjective, evocative themes can increase submissions by 20%, as users respond to engaging prompts (22). For freestyle JPEGs, framing limited editions as exclusive or culturally significant boosts their perceived value, driving sales and trades.

6 Game Theory and Strategic Behavior

6.1 Prediction Market Dynamics

Early themed collects yield more shares but risk misjudgment; late collects diversify but earn less, resembling a non-cooperative game. Freestyle JPEG trading introduces speculative market dynamics, similar to NFT markets, where users strategize based on scarcity and market trends.

6.2 Cooperative Elements

Creators benefit from collective votes and trades, encouraging promotion. Collusion risks (e.g., vote rigging, pump-and-dump schemes) require algorithmic monitoring.

7 User Acquisition and Retention

To attract User A, JPEG can leverage marketing campaigns targeting 18-24 demographic, emphasizing creative freedom in themed and freestyle submissions. For User B, partnerships with crypto influencers can highlight speculative opportunities in trading freestyle JPEGs. Retention strategies include leaderboards for top creators and a referral program offering 10 PX per invited user. Beta tests suggest a 15% DAU increase from referrals.

7.1 Community Building through Tags and Financial Success

JPEG fosters communities through user-generated tags (e.g., #car, #art, #fashion), allowing users to curate and engage with niche groups, such as car enthusiasts or street photographers. These tags enable organic community formation, mirroring social media dynamics where shared interests drive interaction. Additionally, the potential for users to earn thousands or millions through freestyle JPEG sales and themed royalties creates a broader community, akin to crypto culture's growth through financial success. High earners become influencers, attracting followers and expanding the platform's reach, as seen in cryptocurrency communities where wealth generation fuels engagement (14).

8 Development Stages

8.1 Stage 1: Beta Test

Testers receive points and \$100 daily capital to play and predict. Metrics:

- Daily Active Users (DAU): Target 100-500.
- Photos/Day: 50-200 (themed and freestyle).
- Collects/Day: 100-500.

8.2 Stage 2: Points Removal

Points for submissions end, relying on royalties and freestyle sales. Metrics:

- A-to-B Transition Rate: 20-30%.
- Retention Rate: 60-80%.
- Prediction Accuracy: 40-60% (early collects aligning with winners).

8.3 Stage 3: B2B Integration

Companies set branded themes (e.g., Nike's "Just Do It") with bounties and sponsor freestyle JPEG collections. Metrics:

- Bounty Participation: 10-20% of users.
- Submissions/Bounty: 50-100 photos per \$500 bounty.

9 Data and Validation

Simulations based on BeReal's reported 23 million DAU in 2023 (13) suggest a 30% adoption rate among similar demographics, yielding a Stage 2 DAU of 1,500-3,000. A Monte Carlo simulation of the time decay model predicts a 40% increase in early collects when $k = 0.1$ in the exponential decay formula. Freestyle JPEG trading is projected to increase creator revenue by 25% based on NFT market analogies (14).

10 Future Plans

10.1 Photo Ownership

All photos submitted to the JPEG platform, whether themed or freestyle, become company-owned assets. This enables the platform to leverage user-generated content for further development, marketing, or data-driven initiatives, while ensuring compliance with user agreements and privacy regulations like GDPR.

10.2 Data Annotation and Curated Themes

JPEG will implement data annotation for photos as a monetization strategy, enabling the platform to offer high-quality, precisely labeled machine learning training data to businesses and developers. By annotating photos with attributes (e.g., "urban," "minimalist"), JPEG can curate themed and freestyle JPEGs for targeted outcomes, such as brand alignment or cultural trends, creating a new revenue stream while enhancing B2B applications and user engagement.

10.3 Dual Token System

JPEG introduces a dual token system to balance user engagement and investor speculation:

- **Pixels (PX):** An in-game token used for themed collects and freestyle purchases, designed to feel non-financialized for users. PX may operate off-chain for simplicity or on-chain for transparency, ensuring seamless gameplay while maintaining low transaction barriers.
- **\$JPEG:** A governance token for investors, enabling speculation on the platform's success. \$JPEG serves as the on-ramp/off-ramp for financial transactions, with trading volume and platform fees influencing its value. Profits from the app (e.g., from freestyle sales or bounties) are reinvested to create deflationary pressure on \$JPEG, increasing its value by reducing circulating supply.

This system aligns user incentives with investor interests, fostering a sustainable economic ecosystem.

11 B2B Potential

JPEG can serve as a user-generated content (UGC) engine, with brands setting bounties for themed content and sponsoring freestyle JPEG collections. A \$500 bounty may yield 100 submissions, amplifying reach. Moderation ensures brand alignment.

11.1 B2B Case Studies

A hypothetical Starbucks campaign with a \$1,000 bounty for "You Before Your Morning Coffee" could yield 200 submissions, generating 10,000 social media impressions, based on Instagram's 2024 UGC campaigns averaging 50 impressions per post (11). A branded freestyle collection could further amplify engagement. Additionally, \$JPEG can be used to purchase data-annotated JPEGs, providing businesses with valuable, curated datasets for marketing or machine learning applications.

12 Ethical Considerations

JPEG must ensure user privacy by anonymizing photo metadata and complying with GDPR, particularly with company ownership of photos. Fairness in royalty and freestyle revenue distribution can be maintained through transparent algorithms, preventing top creators from dominating earnings, as seen in 10% of Instagram creators capturing 90% of revenue (12).

13 Risks and Mitigation

- **Market Domination:** Cap collects and trades per user.
- **Incentive Imbalance:** Adjust royalty split (e.g., 25% creator, 75% pool) and monitor freestyle pricing.
- **Time Decay:** Test exponential decay models for themed collects.
- **Manipulation:** Use anomaly detection to flag accounts with over 50% of collects or trades on a single photo.

14 Conclusion

JPEG blends creativity and speculation, driven by behavioral economics, themed collects, a freestyle JPEG market, and a dual token system. Community-building through tags and financial success, coupled with strategic future plans, will ensure its success as a social game and B2B platform.

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