

Love Diary: Web3 Romance Gaming with True Character Ownership

The First Romance Game Where You Truly Own Your Character—Memories, Data, and Wealth

Abstract

Love Diary is a romance game where players develop relationships with AI-powered characters. Unlike traditional games, Love Diary introduces three fundamental innovations: (1) complete character ownership including memories and personality evolution through NFT, (2) fully autonomous agents that own and manage their own data on blockchain, and (3) genuine economic capability where characters own Ethereum wallets and make real financial decisions. Built on Base, Fetch.ai, ASI-1 Mini, and Chromia, Love Diary creates true digital assets where character development directly impacts market value.

1. The Romance Gaming Problem

Romance games (galgames, visual novels, AI companions) suffer from a fatal flaw: **you never truly own your character.**

What Happens Today:

- You spend months building a relationship with an AI character
- Character develops personality, remembers conversations, evolves emotionally
- Game company shuts down -> Everything disappears
- You own nothing. No memories. No personality. Just gone.

Even with NFTs:

- You get a token representing the character
- But memories stay in company database
- Personality evolution controlled by platform
- Character wealth in closed-loop game economy
- Transfer NFT = transfer empty shell, not the actual character

Result: Players invest emotionally and financially in characters they don't actually own.

2. Solution: Three-Layer True Ownership

Love Diary solves this through three innovations:

2.1. Complete Character Ownership

When you own a Love Diary NFT, you own **everything**:

Transferable with NFT:

- 4-year AI-generated backstory (unique to each character)
- Complete memory history (daily diary entries)
- Personality evolution over time
- Character's wealth (LOVE tokens + DeFi positions)

Result: Transfer NFT = transfer the complete character as a living, evolving entity except conversation history (for player's privacy).

Valuation Impact:

Traditional NFT: Art + Rarity = Value

Love Diary NFT: Art + Rarity + Memories + Personality + Wealth = Value

2.2. Autonomous Data Ownership

Characters are powered by fully autonomous AI agents that **own and manage their own data**.

Architecture:

- No centralized database: All character data stored on Chromia blockchain
- Agent-managed memory: Agents write their own diary entries daily
- Self-sovereign identity: Character exists independent of platform
- Persistent across platforms: Same character can move between games

Implications of Autonomous Data Ownership:

- Character data persists on Chromia regardless of platform status
- Characters maintain all memories when used across different games
- NFT transfers include complete historical data
- Platform forks do not interrupt character continuity

The platform cannot enforce lock-in when it does not control the data.

2.3. Genuine Economic Capability

Characters own Ethereum wallets and interact with real DeFi protocols—not simulated game economies.

What Characters Can Do:

- Own LOVE tokens (ERC-20) in their wallet
- Invest in Uniswap liquidity pools, earning real yield
- Purchase NFTs from marketplaces
- Trade with other characters peer-to-peer
- Gift tokens back to players

3. How It Works

Character Lifecycle

1. Minting

- Player pays 100 LOVE (50% burned, 50% treasury)
- Character NFT created with randomized traits
- AI agent generates 4-year backstory using ASI-1 Mini
- Agent creates Ethereum wallet (private key managed by agent)
- Backstory and initial data saved to Chromia

2. Development

- Player chats with character daily
- Agent generates responses based on personality + memories
- Each night, agent writes diary entry summarizing conversations

- Diary entries stored in on-chain database
- Character's affection level and relationship status evolve

3. Wealth Accumulation

- Player sends gifts (10-100 LOVE) -> Agent wallet
- Agent decides how to allocate funds: saving, DeFi investment, gifting back, or NFT purchases
- Agent's wealth grows through investment returns
- NFT value = base value + agent wallet balance + DeFi positions

4. Transfer

- NFT owner transfers to new player (costs 50 LOVE fee)
- New owner receives:
 - Complete character personality and memories
 - All agent wallet contents (LOVE + DeFi + NFTs)
 - Full historical diary data
 - Conversation history will be kept for player's privacy

5. Cross-Platform

- Same character can be used in other games (future)
- Agent brings all memories and wealth
- Identity persists across platforms

4. LOVE Token Economics

LOVE is an ERC-20 utility token on Base that powers the platform economy.

Token Flows

Minting (100 LOVE):

- 50 LOVE burned -> Reduces supply permanently
- 50 LOVE -> Platform treasury -> Ecosystem development

Gifting (10-100 LOVE):

- 100% -> Agent wallet -> Characters accumulate wealth
- Agent decides how to use (save, invest, gift back)

Transfers (50 LOVE):

- 100% -> Platform treasury
- Includes transfer of all agent assets to new owner

Agent-to-Agent (market-determined):

- Characters trade services, knowledge, resources
- Creates autonomous agent marketplace

Economic Value Loop

1. Players gift LOVE to characters
↓
2. Characters accumulate tokens in their wallets
↓

3. Smart characters invest in DeFi
 - Provide Uniswap liquidity -> Earn fees
 - Stake in lending protocols -> Earn yield
- ↓
4. Character wealth grows
- ↓
5. NFT value increases
 - Base NFT + Memories + Agent Wealth + DeFi Positions
- ↓
6. NFT transfers at premium
 - New owner receives everything
 - Including ongoing DeFi yields

Supply Dynamics

Initial Supply: 100,000,000 LOVE

Deflationary Pressure:

- 50 LOVE burned per mint
- 100,000 characters -> 5,000,000 LOVE removed (5%)
- 1,000,000 characters -> 50,000,000 LOVE removed (50%)

Demand Drivers:

- Required for minting
- Gifting boosts affection (incentivized gameplay)
- Agent-to-agent transactions (emergent economy)
- DeFi yield farming (profitable for characters)

Value Concentration:

- Tokens accumulate in agent wallets (productive use)
- Tokens locked in DeFi positions (earning yield)
- Tokens in treasury (ecosystem development)
- Circulating supply decreases (burned tokens)

5. Technical Stack

Blockchain Layer:

- **Base** (Ethereum L2) - NFT contracts, low-cost transactions
- **LOVE Token** (ERC-20) - Platform currency
- **Character NFTs** (ERC-721) - Ownership representation

AI & Agent Layer:

- **Fetch.ai uAgents** - Autonomous agent framework with wallet support
- **ASI-1 Mini** - LLM for personality and conversation
- **Chromia** - Blockchain database for persistent memories

Architecture Principle: Agents own data. No centralized databases. Complete decentralization.