



SummerTime Litepaper

(Decentralized SHELL stablecoin)

A decentralized stablecoin issuing protocol leveraging over-collateralization of locked yield-bearing liquidity.

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Introduction

Decentralized Finance (DeFi), an umbrella term for various applications and projects in the public blockchain space, has seen tremendous growth since 2020. The ecosystem has seen growth with the Total Value Locked (TVL) in DeFi at least **20,000%** up in 2 years, peaking at **200B USD total value is locked**, as of Jan 25, 2021, in numerous protocols offering users different kinds of decentralized financial services. It currently sits at **48B USD with far more room to grow**.

Source: [DeFi Pulse - The Decentralized Finance Dashboard](#)

Stablecoins – a digital asset that is pegged to fiat currency – is considered one of the most innovative pillars in DeFi. Stablecoins provide an avenue where you can park your money, hedge against volatility, or wait out uncertain market conditions.

There are two major types of stablecoins. Fiat-backed and crypto-collateralized stablecoins. Fiat-backed, such as USDC and USDT, are not decentralized meaning they can be censored, frozen, or even blacklisted a user from using it. While crypto-collateralized stablecoins such as DAI give the user much more flexibility and liberty. Crypto-backed stablecoins also create an avenue for their user to access and

spend the value of their crypto, which backs it, without having to sell it. Thus the user retains access to their crypto's value appreciation potential, with also the assurance that the stablecoin is not exposed to volatility.

The **non-fungible tokens(NFTs) space** has equally seen explosive growth since the beginning of 2020, with total sales volume exceeding more than **1 billion USD**, the majority happening in the last six months.

Source: [CoinMarketCap NFT Collections Sales Volume Overview - coinmarketcap.com](https://www.coinmarketcap.com/nft-collections-sales-volume-overview)

Individually, each space is experiencing massive exponential growth, but as of yet, no project has emerged that fuses the blazing potential of both into one platform.

Until now.

SummerTime Finance is a decentralized stablecoin issuing protocol leveraging over-collateralization of locked yield-bearing liquidity, in fully on-chain decentralized exchanges, with gamification using NFTs to spice things up.

SummerTime allows you to keep the upsides of your yield-bearing liquidity and be able to access & spend some of its value. There's no need to exit your liquidity positions and sell your crypto to meet your seasonal needs when you can have both at the same time.

The Problem: Capital Illiquidity & Efficiency

As Dan Elitzer explained in this post on [superfluid collateral](#):

"If assets can be allocated for multiple purposes simultaneously, we should see more liquidity, lower cost of borrowing, and more effective allocation of capital."

Through the exponential growth of TVL(total value locked) in DeFi, there are **billions of dollars locked & concentrated** in numerous DeFi protocols/platforms represented as yield-bearing tokens to the user from the likes of automated market makers (AMM) LP tokens, such as Uniswap, Sushiswap, PancakeSwap, Biswap, QuickSwap, or yield-farming optimizers such as Yearn, Beefy, and Autofarm.

Platforms such as AutoFarm do not give you IOU tokens that represent your deposits, so users like you are left, generating & compounding your yields, but also completely locked out of accessing the value of this capital in any way.

Locked out is not necessarily a bad thing here, but this removes these billions of dollars out of circulation in DeFi, reducing overall liquidity available across the DeFi ecosystem.

In short, these are billions of dollars sitting, technically in use, in these protocols, but with the owner of this liquidity not being able to spend any of its value when they'd like to without exiting their positions which triggers the end of the user generating yield.

SummerTime protocol's solution to this and more, and our 1st product, is **the SHELL stablecoin**, which is setting out to make the value of this yield-bearing liquid capital accessible.

The Solutions: The SHELL Stablecoin

SHELL: the decentralized stablecoin

SHELL is a decentralized, censorship-resistant, unbiased, over-collateralized backed stablecoin, soft pegged to the U.S Dollar.

SHELL borrowing (minting) is **non-custodial**. This means the user has complete control over their capital and can deposit their capital, borrow SHELL (by minting), payback SHELL (by destroying), and withdraw their collateral anytime, at their will, instantly.

Every **SHELL** token minted is backed by **at least 150%** of the yield-bearing collateral locked by the user.

For example, PancakeSwap AMM LPs from their respective pools e.g BTCB-BNB, ETH-BNB, USDT-USDC, and others, are driven to keep the upside to their portfolio and can borrow up to **50% of their collateral by minting SHELL**. Upon paying back their **SHELL** debt they will regain access to their collateral, which they have to lock in their protocol-controlled provisioned vaults.

SHELL tokens can be **borrowed (minted) interest-free** since the protocol can compute the right minimal percentage to use from the yield generated by the user's LP collateral

to pay the interest of the debt, spread over the year. This is possible due to the SummerTime protocol depositing the user's yield-bearing LP tokens in their respective yield farming pools, thus continuing to generate yield.

Your one-stop-shop for your liquidity

We are like **MakerDao, Beefy Finance, Alchemix and Arrakis finance** had a baby.

To summarize our offerings:

1. We enable you to keep your liquidity positions and all of their upsides
2. To continue to earn rewards in the originated decentralized exchange
3. Optimize your yield, by compounded automatically
4. Take a loan, go do amazing things, and let your loan be repaid automatically t
5. Earn more rewards, SummerTime's SUMMER governance tokens

To break it down breakdown:

1) LP positions sitting idle in yield farming smart contracts are capital inefficiency at its worst. The **SummerTime** protocol will automatically stake their LPs into the respective decentralized exchanges farming pools.

2) **SummerTime** will have a yield-optimizing feature built into it – Just like Beefy Finance. It will automatically claim your rewards periodically and automatically compound them back to your liquidity.

Each LP collateral accepted has its unique strategy for yield farming, which normally involves reinvesting the earned rewards back as the crypto assets staked in the liquidity pools. A simple explanation is it farms the rewards given from staked collateral and reinvests them back into the liquidity pool. This compounds the amount of interest received and increases the amount staked that the yield is based on. A yield optimizer can repeat this process up to thousands of times a day.

3) **SummerTime** will also have a way to automatically repay any borrowed debt, SHELLs minted, using the owner's yield being continuously farmed or even earnings made from being an LP.

Eg. If the user's BNB-ETH liquidity pool capital is generating a 10% yield per annum, and the SHELLs borrowed debt interest rate is 4.5%, then the protocol will overall take 4.5%

within the year to pay down the debt interest rate being accrued, making the debt interest free. 6.5% of the yield earned will be compounded back into the LP collateral.

The user will be able to borrow **SHELL** tokens at an initial interest of **4.5%**.

Introducing a novel approach to liquidity mining. Our secret: It includes NFTs

Further, **SummerTime** brings you new and interesting staking & liquidity mining experience, leading you to experience higher farming rewards and fun, richer & profitable NFT gameplay.

SummerTime drastically improves NFTs, by giving them real, fun & profitable use cases within the platform. This makes SummerTime a unique gamified lending & borrowing dapp with profit potential & gaming fun.

Detailed info on how this yield farming gamification, with NFTs, works will be provided later on, in the roadmap - to be released.

SummerTime protocol is permissionless, transparent, and non-custodial. It will be initially built and deployed on the **BNB Smart Chain****.

The Markets, Interest Rate Models & Liquidation

The Markets

SummerTime Finance will initially allow users to deposit their yield-bearing LP tokens, help them to keep generating yield and compounding it just like yield optimizers such as Yearn, PancakeBunny or Beefy do, and be able to borrow against it through minting the **SHELL** stablecoin.

Other yield optimizers such as BEEFY finance give you IOU LP tokens, these can be used to identify which LP tokens a user has and calculate their value, which then can be used to calculate a user's total debt allowance.

SummerTime Finance's stablecoin borrowing interest rate will initially be **4.5%**.

Liquidation

In SummerTime, **Liquidation** is the process of automatically selling a user's collateral and repaying some of their debt when their debt-to-collateral ratio drops beyond the given threshold. This happens to make sure that there is enough collateral backing the **SHELL decentralized stablecoin** from a user's vault.

SummerTime Finance uses a **partial liquidation** mechanism like just Aave.

Liquidations occur when your debt (the value of the SHELL) minted, to collateral ratio falls below the required ratio eg. below 150%.

SummerTime protocol will calculate how much of your collateral needs to be sold, swapped to **SHELLs**, and used to pay enough debt to rebalance the debt-to-collateral ratio back to 150%. This ensures you never lose all your collateral and only enough is sold to rebalance the ratio back to what is standard. This is what is known as **partial liquidation**.

Yield Farming Gamification (with NFTs)

The Why

Through gamifying **SummerTime Finance** believes it can distribute its governance tokens and its accrued fees/profits back to the users/community, as all protocols should, in fun, exciting & educative ways by creating new interesting ways of generating additional income & keeping their community engaged.

By **SummerTime** integrating NFTs into its lending & borrowing protocol, it gives birth to new & fun possibilities that a user can take advantage of.

Here are the possibilities we've identified and will incorporate into the protocol:

- The ability to earn in different magnitudes is part of the lending protocol's accrued margin fees/profits.

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- The ability to boost their **governance farming rewards** up to 3x*
 - The ability to earn & claim new NFTs periodically by staking their **SummerTime** governance tokens or **IOU-LP representative tokens** (see explanation below)
 - The ability to lock their staked SummerTime governance tokens with varied lock times and reduce significantly the periodic waiting time to generate/earn new NFTs
 - The ability to reduce the vesting period of their earned governance tokens by applying the traits of their minted NFT to the staked & locked tokens.
 - The ability to buy & mint NFTs directly from the SummerTime platform acts as a potential revenue stream for SummerTime and its community.
 - The ability to buy and sell the NFTs in an open market, with each NFT's price dependent on the NFT's rarity and trait power. (a marketplace)

* - The final number is subject to approval

IOU-LP representative tokens

When a user deposits their collateral LP tokens in the platform, they receive tokens that map the liquidity deposited and accrue the interest of the deposited underlying asset. These tokens can then be further staked to earn and mint the platform's **proprietary NFT collectibles a.k.a SummerFlings**.

More comprehensive info about gamification will be released later, down the roadmap.

Tokenomics (SUMMER tokens)

SummerTime DAO will be the governing body of **SummerTime Finance lending & borrowing** protocol & platform, the initial product.

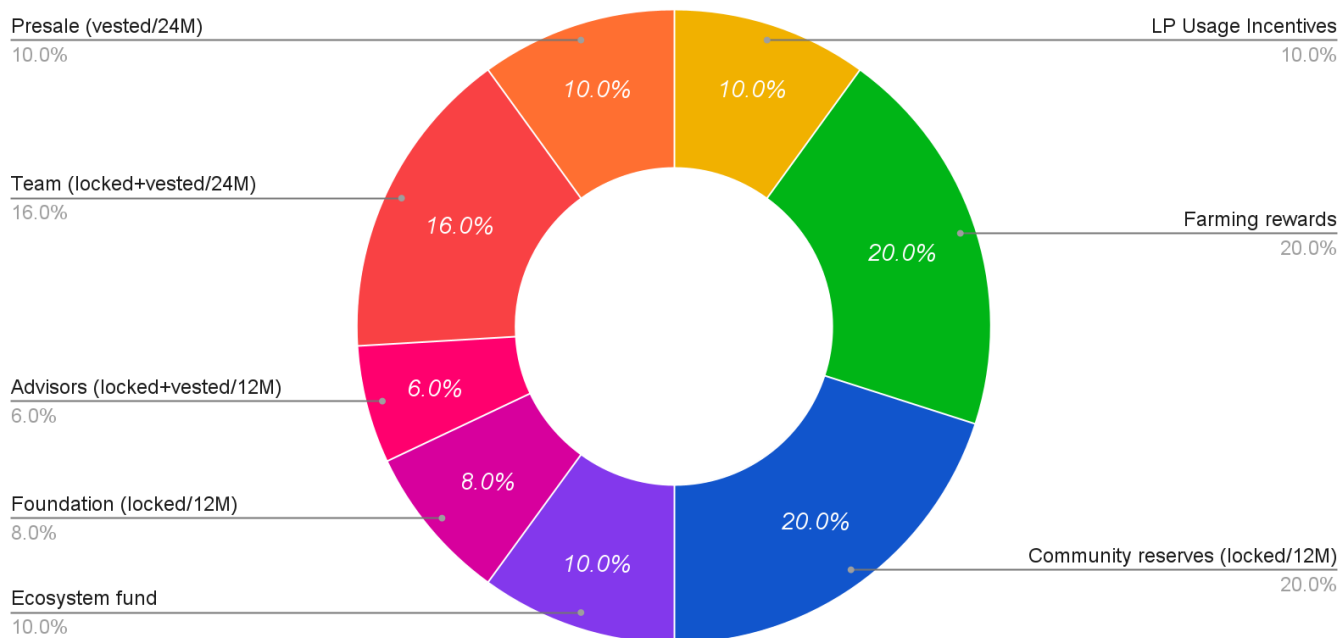
SummerTime token, **\$SUMMER**, is the governance token and will be used for various mechanisms that allow its owners to govern and earn the protocol's fee.

The main purposes of the **\$SUMMER** token are to incentivize depositors and borrowers on the **SummerTime Finance** platform and get as many users as possible involved in the protocol's governance.

Summary

The max supply of **\$SUMMER** tokens will be **500,000,000 (500M, hard-capped)**

SUMMER Token Supply Breakdown



The breakdown:

- **60% to the community**
- **16% to the team**
 - **2 years vesting schedule, with a 6 months cliff**, then a weekly release schedule after the cliff period is over, for 18 months
 - **2%** will be minted and unlocked to be used by the team to fund the development from the onset.
- **6%** to advisors
- **10%** to presale (will most likely involve family, friends, initial community members, angels, and optionally VC investors)
- **10%** to the ecosystem fund, locked, will be mostly used to incentivize the community through marketing, campaigns, community tasks, etc

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- Will unlock bit by bit through governance proposals that state what amount will be used for a certain use case
 - **8%** to the **SummerTime** foundation, locked for at least 12 months

Community distribution (60%)

- **10%** will be used to incentivize potential decentralized exchange liquidity providers to use the platform who have a long time served the community
- **20%** to the community - **24 months** farming schedule
 - **20%** to the SUMMER stablecoin borrowers, of the platform, distributed through yield farming - with a ***community vesting schedule**
 - **10%** to SHELL & SUMMER liquidity providers - with a ***community vesting schedule**
- **30%** to the community treasury, locked (currently unminted)
 - Governance will be used to decide when to unlock and how they will be used

A breakdown of the **community vesting schedule**:

- **30%** is released immediately to the user per block earnings
- **70%** is locked for 6 months (not too short nor too long)
- At the end of the 6 month cliff period, it's released weekly over 6 months
- This reduces the selling pressure of the **SummerTime**, SUMMER, tokens from the onset and onwards

The **community vesting schedule** is our distribution system that enables the following:

- Prevent abuse/exploits from flash loans and flash minting
- Long-term participation in the ecosystem.
- Create a robust and diverse community & treasury.
- Create locking and vesting to reduce deflation and align stakeholders long-term.
- Penalize users who leave pools too quickly and try to manipulate prices or optimize farming
- Create a community aligned with the long-term success of **SummerTime**

Note: All supply distributions are subject to change with community feedback and governance discussions.

Governance

SummerTime Finance will begin with centralized control of the protocol (such as choosing which tokens to enable or add for lending & borrowing, initial NFTs glossary). Over time, will transition to a whole community & stakeholders' leadership and control.

We anticipate democratizing the following rights in the protocol:

- The ability to increase or reduce the SHELL debt ceiling
- The ability to list new or remove defunct LP token lending pools
- The ability to increase or decrease the debt-collateral ratio of different LP tokens
- The ability to set the appropriate withdrawal fees (if any)
- The ability to set the appropriate liquidation fees percentages
- The ability to update the oracle addresses & techniques
- The ability to withdraw the reserve of a token
- The ability to choose a new admin, such as a DAO controlled by the community; because this DAO can itself choose a new admin, the administration can evolve over time, based on the decisions of the stakeholders
- The ability to make community treasury vault decisions
- The ability to upgrade to the system
- The ability to add new NFTs with new capabilities or use cases within the platform (or who knows, externally created NFTs too eg. crypto punks)
 - More info on this later (we want to surprise y'all)