STREAMABLE FINANCE

Whitepaper
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Contents

Introduction

During the late 90s and 2000s increased network bandwidth, http and html allowed users to access video and audio over the Internet.

Streaming was really different from using FTP to move files around. People could now access distributed content stored anywhere in the network without needing to download it locally to reproduce it.

At the very beginning, just a few were able to see or understand the potential of this apparently small change. Just after a while many services and applications started to appear and threaten consolidated industries.

The way of accessing the content was changing and so, in a cascade of cause-effects, the way of storing, using and consuming was also different impacting several sectors.

In less than a decade people no longer used cassettes, didn't buy discs in a store or watch cable tv. Several companies that didn't adapt to the change died and others flourished on their ashes.

Audio and video streaming is now mature, with many services competing in the market, while the Internet is moving from Web2 (the internet of the information) to Web3 (the internet of values).

Web3 It's still in its infancy but it's clear that it allows us to access, move and transfer properties or values in a very fast, innovative and efficient way.

Current Web3 is similar to Web2 during the late 90s and 2000s. It's still niche, it still doesn't affect "real" finance or banking business. Just a few trust DeFi instead of their brokers or bankers.

Services are still young and unsophisticated. Value is still moving around with transactions - like banks do - or like ftp was the way to move around files to access them at the beginning of the internet.

So what will happen if we start to stream values, like we did with audio and video?
How will it change our lives in a few years?

We think that streaming money an even bigger revolution that the one brought streaming audio and video would start. That's why we are building an infrastructure to stream money and support real time finance.

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You should consult a lawyer, accountant, tax professional and/or any other professional advisors as necessary prior to determining whether to purchase Streamable Finance tokens.

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PART I

General Overview

Executive Summary

Mission & Vision

Our vision is to move the financial world *from Static Ledgers to Real Time Finance* and our mission is to deliver a modern, secure, integrated real time payment infrastructure to achieve this.

In our journey to implement this, *we are redefining how money is*:

- being moved, spent and invested
- perceived, understood and used
- stored and represented

And we believe that *we can help people globally to*:

- Control their money - ability to access their funds anytime and anywhere
- Plan spending and program decision - with powerful, visual and real time tools
- Achieve better financial results - enabling people to optimise, control and understand their spending
- Create opportunities - offering a modern payment infrastructure that better models payment needs than transactions with real time finance payment primitives and products.

Problem Statement

In the very beginning of banking, a bank was simply a relationship between people with notes written on a paper ledger.

Progressively these relationships and notes have been replaced by technology.
Banks massively invested in new hardware and software and paper ledger and people have been substituted with mainframes.

In a few years, many different subsystems were created to manage different sectors of the banking system or departments, like cards, investments, retail or commercial banking.

Often these systems were separated and incompatible with one another even in the same bank. Payment systems were built and developed differently in different parts of the world increasing complexity and inefficiency for cross border payments and settling.

Things quickly become very fragmented and very hard to manage. Banks got stuck in their own technology framework and the result was a total dissatisfaction of the users, forced to use several different interfaces and very inefficient services.

Systems have become so complex that now one of the most problematic aspects for a big bank is that they can't control the cost of their own operating system.

	Banking Infrastructure	Since the 4th century BC banking is substantially a set of records on a static ledger which values changes as the result of a transaction. Banking systems are fragmented, complex and stuck in their own technology framework
	Fintech	Fintech can partially overcome banking inefficiency and problems rewriting from scratch part of the system using more modern architecture. Fintech deeply relies on the legacy banking system so it has been so far a "patch" more than a disruptive technology.
	Crypto Space	Crypto space brought a lot of innovation and disruptive solutions but it's not mainstream. Continuous fraud, theft and lack of regulation is limiting the adoption of important and disruptive solutions that could dramatically improve the payment and financial landscape.

This has created opportunities for the so-called challenger banks or fintechs.
Writing from scratch their system, using the cloud and modern computer languages and designing intuitive and fresh interfaces, fintechs gained advantage on legacy banks and represent now a real challenge to them.

Fintech promised speed and disruption in financial services but at the end of the day, scratching under the surface, fintech is just a nice facade built on old foundations.

Fintech definitely didn't change the way payments are made (transactions) or how the money is stored and represented: money containers (accounts or wallets) are still non standardised, they don't interoperate with each other and at the end of the day they just represent the old static ledger introduced in the 4th century BC!

On the other side, a lot of innovation is happening in the crypto space. DeFi is changing the way people can transfer, exchange and store money and is giving to everyone advanced financial tools now accessible just to a niche of people or hedge funds. With DeFi or crypto we can reinvent any single aspect of finance.

Web3 is the key to innovation. In Web3 there are no constraints, and we could for example imagine rewriting the foundations of payments to build new modern and more flexible and powerful payment applications.

These primitives could, for example, encapsulate conditions and substitute or enforce legal contracts.
Instead of moving statically in discrete transactions, money could flow like streams or could be programmed depending on dynamic events.

This would open the frontiers of real time finance, and it is currently achievable blending the innovation and flexibility coming from the crypto space into the secure and compliant fintech/banking domain.

We took the challenge to implement this and we are building a new infrastructure that will make obsolete the legacy transactional system and that will bring a lot of innovation and real disruption.

Our Solution

In the picture below an overview of the products we are offering:
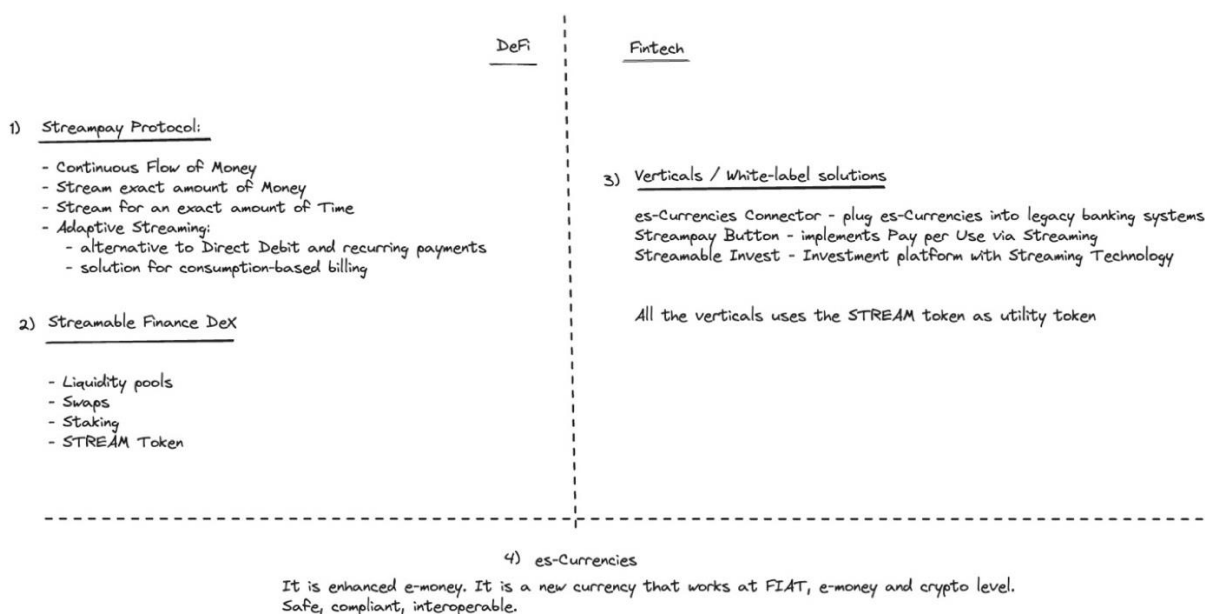
Two verticals operate in the DeFi space and the others are Web2/fintech products.
In term of functionalities, they will offer:

Streampay Protocol (DeFi)

Streampay is an open protocol to stream assets and will be continuously developed and improved by our DeFi team.

The functionalities it provides provide are:

- Streamable Payments: *continuous flow of money, streaming an exact amount of money, stream for an exact amount of time*
- Adaptive Streaming: *alternative to direct debit and recurring payments, solution for consumption-based model*
- Asset conversion (from not streamable to streamable and vice versa)

Dex (DeFi)

Streamable Finance Dex provide a set of extended tools for real time finance, in particular it offers liquidity and swapping pools for the coins in the Streamable Finance ecosystem.

Streamable Finance goal is to be the primary liquidity source in DeFi of Streamable Finance ecosystem's tokens and other assets.

The functionalities it provides are:

Liquidity Pools, Swaps, Rewards, Native Tokens.

Verticals (Fintech)

Streamable Finance team is implementing different verticals to showcase the power of the technology in various sectors.
The recent finalized ones are:
- es-Currencies Connector - plug es-Currencies into legacy banking systems
- Streampay Button - implements Pay per Use via Streaming
- Streamable Invest - Investment platform with Streaming Technology

All the verticals use the STREAM token (the project native token) as utility token.

es-Currencies (enhanced electronic money solution)

es-Currencies is the native currency of the system and represents an evolution of e-money blending fintech and the innovation of blockchain.
Es-Currencies is safe, interoperable, recognised and official. It is a new currency that works at FIAT, e-money and crypto level.

Key Challenges in Driving Money Streaming Adoption
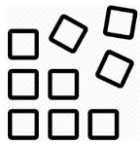
At the time of writing this document, very few people are aware that it is possible to stream money and move to real-time finance.

Also, the domain of this technological advancement is for now just the crypto space, since there aren't integrations with any fintech layer yet, so it's really not possible to stream FIAT currencies.

Real-time finance basically does not exist and there's no market built on it. There are several challenges to bring this project mainstream and succeed.

We summarise them here:

	Culture	Benefits of a streaming economy and of real time finance could be difficult to understand. People may not be ready to adopt a more modern payment infrastructure or not have enough incentives on building new applications on it.

	Fragmentation	In the future, we may have many different real time or streaming protocols and these protocols may be incompatible one to the other, mimicking the current banking system. The obsolete legacy banking system may remain distant and not connected to these new payment infrastructures, limiting adoption.
	User Experience	Consequence of the fragmentation above could be limited application or user cases, poor user experience, difficult to understand and access
	Security, Compliance	New technology may be intrinsically not secure since most systems can be considered secure just at maturity (security-by-maturity). User confidence may be damaged or compromised in the cause of hacking, fraud or theft. Also systems need to be totally compliant and regulated to be reliable and legal.
	Separation between crypto and Fintech	Crypto, banking and fintech are usually managed as separated worlds. Rules that apply in a space do not apply in another and often crypto experts have no understanding of banking and vice versa. This is a problem because the innovation that is created in crypto hardly gets implemented as a solution in banking.

Our Strategy

To overcome the above challenges, our strategy is to leverage payment solutions and vertical application in the Fintech area to driving adoption and user acquisition, continuously drawing ideas and innovation from the DeFi department.

DeFi and Fintech departments have different goals, but they will work in synergy with the result of bringing the latest technology and innovation in the regulated markets and encapsulated in an accessible and friendly interface.

Our Fintech platform will become a secure gateway to DeFi and our users will be able to access the latest financial innovation and primitives.
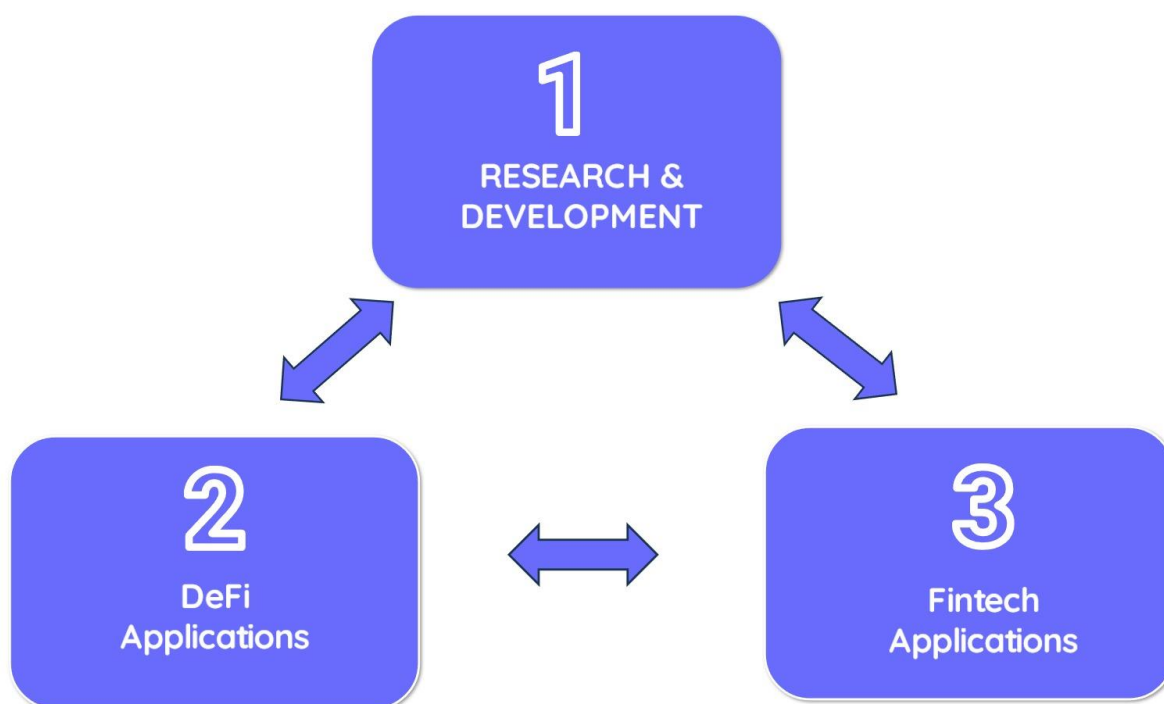
Department focus:

DeFi

The DeFi space has an enormous disruptive potential. Accessible, permissionless, decentralised infrastructures can be created bringing a lot of innovation since they are not stuck in old technology or legacy systems.

Our DeFi department will continuously develop and improve our real-time payment infrastructure exploring every possible field and applications of programmable flows of money.

Fintech

Fintech department is committed to providing solutions that are 100% regulated, compliant and secure.

Any technological advancement obtained in the DeFi space, once tested and proved, will be used to create innovative verticals or solutions in our Fintech offer, perfectly integrated and blended in a compliant fintech / banking solution.

Final users will be able to safely and easily access disruptive and innovative financial tools that will create a lot of benefits.

Open protocol

Our Streamable Finance protocols and blockchain solutions will be available for free via SDK. We encourage people to build solutions on our protocol and being involved in the continuous process of improving it.

We strongly believe the more solutions will be implemented, even by competitors or third parties, the faster the adoption of real time finance will be.

Support of Fiat Institutions – white-label solution

In our journey to achieve the vision of moving from static ledger to real-time finance, we will also actively support fiat institutions and help them to integrate their system with our platform or we will support them to build solutions for real time finance.
Our platform and solutions will also be available in whitelabel. Any bank or organisation will be able to quickly move towards real time and streaming solutions acquiring new customers and building new appealing products.

Token

Our native token is distributed with the introduction of Streamable Finance Dex and will empower all the subsequent modules, products and services that we will release offering utility across different user cases.
More details about the initial token distribution can be found in this whitepaper on the relative "Token" section.

Commitment to Security & Compliance

Even if building new technology and solutions come with some risks, we are building our system with security in mind since day one.

Building a secure and compliant solution has always been our priority and we will constantly complete detailed assessment before and after every release.

Favourable Future

According to several studies, the number of crypto users will grow exponentially in the next coming years.
In less than a decade, crypto users will grow 5x, moving from 200 million of current users to a billion users in 2030.
A substantial portion of GDP will reside on the crypto economy consequently.

Crypto assets are the natural ecosystem of real time finance and crypto users are more inclined in welcoming innovative technology.

The same can be said about CBDC (*Central Bank Digital Currency*). It's very plausible that CBDC will become a reality in the next few years since many governments are already experimenting at the time of writing this document.

Streamable payments and real time finance could be a killer application to demonstrate utility for this new type of currency.

CDBC can be streamed to pay salaries, pension or in other services creating benefit and consensus between the population.

For this reason, we really think that in the next coming years there will be a significant need for new payment technologies and solid, compliant and innovative projects like ours will get important traction and a big user base.

Technical Background

Decentralised Finance (DeFi) at a Glance

The base layer of financial services captured by DeFi can be classified functionally by the action an end-user performs on a unit of value. Individuals and smaller enterprises not specialised in financial markets first and foremost need access to transfers, exchanges, and loans. More complex functionality includes instruments for hedging and advanced speculation: short positions, leveraged positions, prediction markets, flash loans, options, etc.

A separate section is made up of infrastructure and utility tools mostly specific to the industry: connections and wrappers over DeFi protocols (both technical and customer-facing), and instruments for data provision.

The thought process of decentralised finance dates to at least 2016 - when several products were proposed in the community - or even 2014 - when Ethereum redefined the scope of possibility with regards to decentralised tamper-proof computation. In embodied form, DeFi is viewed as hitting the ground in late 2017, particularly with the launch of Maker DAO - a non-custodial algorithmically stabilised currency pegged to the U.S. dollar that has, in general, successfully maintained the peg ever since, with limited exposure to central party influence (more on that later).

The general idea was to produce a permissionless credit system, the ability to borrow money after putting up excessive collateral. Naturally, the borrowed currency needed to be stable, and the collateralization of the entire monetary mass needed to support it.

The year 2017 also witnessed the launch of Bancor protocol, which pioneered in public view the concept of an exchange engine without an order book, running solely on smart contracts in an efficient manner.

Go-to protocols for lending (Compound) and prediction markets (Augur) were launched on Ethereum's main net in 2018.

In the following sections, the functional breakdown will be presented, reviewing blockchain structure and mechanisms that have been considered by live projects to provide the functionality in a permissionless manner, with a design goal to avoid introducing potential single points of failure.

The approach entails the replacement of the centralised mechanisms for the enforcement of desired behaviour and the provision of required inputs with programmable rules, algorithmically adjusted incentives, and actions of rational profit- seeking market agents.

DeFi principles

The DeFi principles are based on the creation of an innovative ecosystem of financial services, which is accessible to everyone without exception. According to the crypto community of Decentralised Finance, developers in this area adhere to several principles:

- Products must be open source and compatible since this allows products to interact within the ecosystem from a technological point of view, which increases their practicality and popularity.

- DeFi projects adhere to financial inclusion, i.e. Decentralised Financial services should be available to absolutely everyone who has access to the Internet.

- Financial transparency is very important: at the user level, all information must remain confidential, while within the market, all data must be transparent.

A relative concept echoing Traditional Finance

DeFi is part of Fintech as it incorporates emerging technology with the purpose of improving services to clients, bettering the financial industry as a whole. It can be defined as financial smart contracts, protocols, decentralised applications (dApps) executed on blockchains, and distributed ledger technologies (DLTs), to change how banking, lending, and trading is done.

Development around Decentralised Finance is broad and divided into two main categories:

- The first are solutions that are actively empowering individuals by building products that allow them to better engage with decentralised systems such as payments, trading, or lending.

- The other arm is trying to rope in traditional systems, building enticing products or services that change narratives by incorporating effective and efficient blockchain-based options in their operations.

Decentralised Finance (DeFi) Stack: Product and Application View

We are still at the very beginning of the development of DeFi, nevertheless, it is impressive what has already been created in such a short time (Ethereum was only developed in 2013and went live in 2015).

The long-term vision of DeFi is to connect these "LEGO bricks" to build a LEGO brick house, a fully-functioning and fully automated trust-less financial system. We believe that the real advantages of DeFi lie in the intelligent combination of modularized financial primitives.

From Static Ledgers to Streamable Finance

A payment stream is a payment that occurs continuously, just like the stream of water out of a tap.

As we know, the current banking system can't represent a flow of money since it uses transactions.

In a ledger-transactions model, we could replicate a flow of money with many ($\rightarrow \infty$) small transactions, but this would be too costly or simply not doable.

For example, Revolut implemented a very basic version of 'pay on demand' where the user salary is paid "continuously" and can be withdrawn anytime.

In an ideal implementation, imaging the salary is paid any second to the receiver using a transactional model we would require sending:

30 (days) * 24 (hours) * 60 (minutes) * 60 (seconds) = 2.592.000 transactions

This number is so high that it would be impractical to be implemented in this way even running and settling on a proprietary database.
For this reason, Revolut implements the 'pay on demand' as a simple pay advance via a normal financing operation.

If we want to build a real time, streaming-like model, we need to have something more powerful than the simple ledger-transactional model.

Current banking has just transactions and a static ledger, so the only way to move to a more powerful model is to build a new technological level on top of it and to create bridges to interoperate between the two levels (like fintech does with banking - but going deeper, adding core functionalities and payment primitives instead of just UI/ or top-level changes).

In this way, if we build a layer where real time finance is possible, it would be then relatively simple to interconnect it to a fintech layer (an e-money system) connected to the legacy banking system. In this way the layer will inherit functionalities one with the other becoming interoperable.

Banking will be able to use the streaming and real time finance functionalities on the top layer and the top layer would be able to reach mainstream users and benefit from the regulated banking framework.
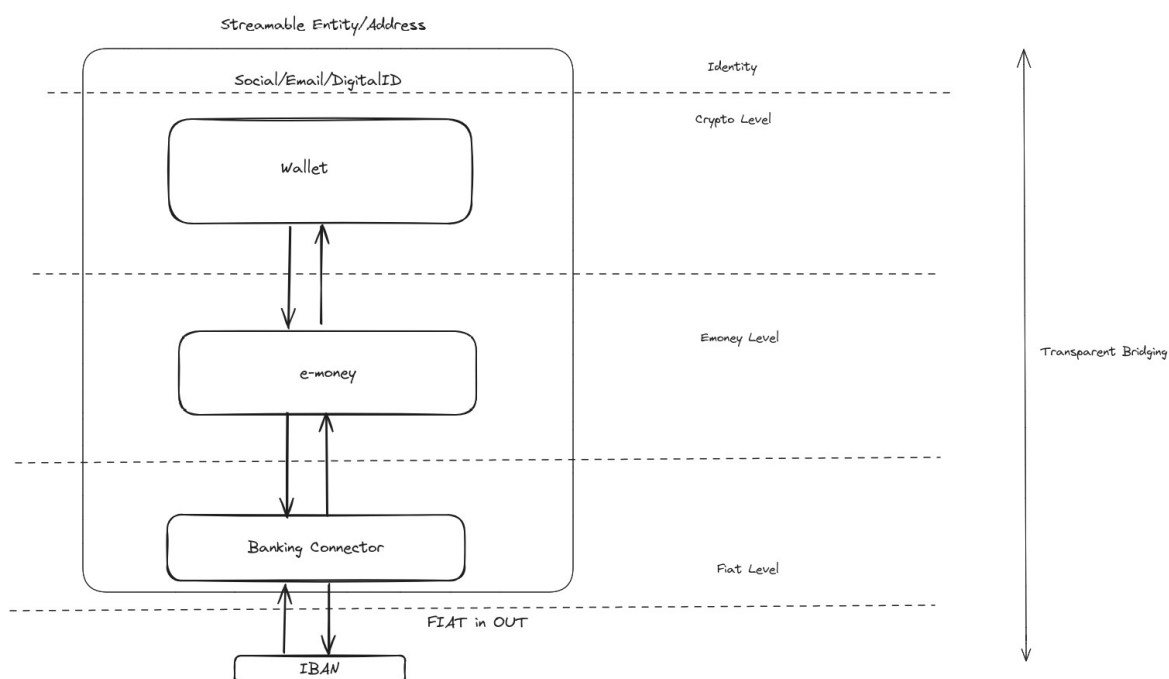
Traditional financial transactions involve moving a specific amount of value through distinct payments in a single settlement between a sender and a recipient.

The effect of these transactions is to change the Static Balance of an account.

Streamable Finance introduces innovative solutions for the transfer of digital value outside of conventional schemes.

In Streamable Finance, balances are not static but dynamic, and transactions are extended and enhanced through the ability to define "Payment Contracts" managed by the payment protocol itself.

The features defined and recorded in a Payment Contract are:

Flow Rate:

The rate per second at which a sender decreases their net flow and increases the net flow of a recipient.

Net Flow Rate:

The rate per second at which an account balance is changing. It is the sum of the incoming and outgoing Payment Contract flow rates of the account.

Net Flow:
5 eur/sec

Sender:

The account that initiates the Payment Contract by specifying a recipient and a flow rate, because of which its net flow rate decreases.

Recipient:

The receiving account of a Payment Contract that has its net flow rate increased.

Timestamp:

The timestamp of the moment when an account creates, updates, or deletes a Payment Contract. The characteristics of the timestamp are uniqueness, immutability, transparency, and verifiability.
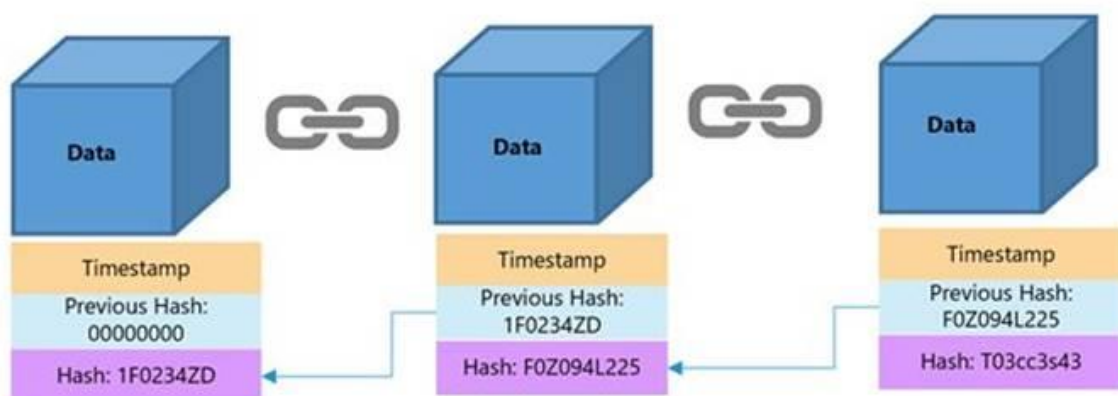
Real-Time Balance of Payment Contract:

The amount, positive or negative, by which the account balance has changed since the last timestamp due to the Payment Contract. It can be positive or negative.

Static Balance:

The account balance at the last timestamp.

Current Balance:

Combining the classic Static Balance with the Real-Time Balances of payment contracts, you get the Current Balance of an account (the real-time balance). It is the actual balance of the account.

Current Balance = (Sum of Real-Time Balances) + Static Balance

It is important to note that unlimited Payment Contracts can be defined, each with its own real-time balances.

The net flow for an account is therefore determined by the netting of all its incoming and outgoing flow rates.

Static Balance	Net Flow	Net Flow
	Contract 1 Balance -10 eur	
Account A Balance 100 eur	Contract 2 Balance +15 eur	
	Contract 3 Balance +5 eur	
100 eur +	10 eur	= 110 eur
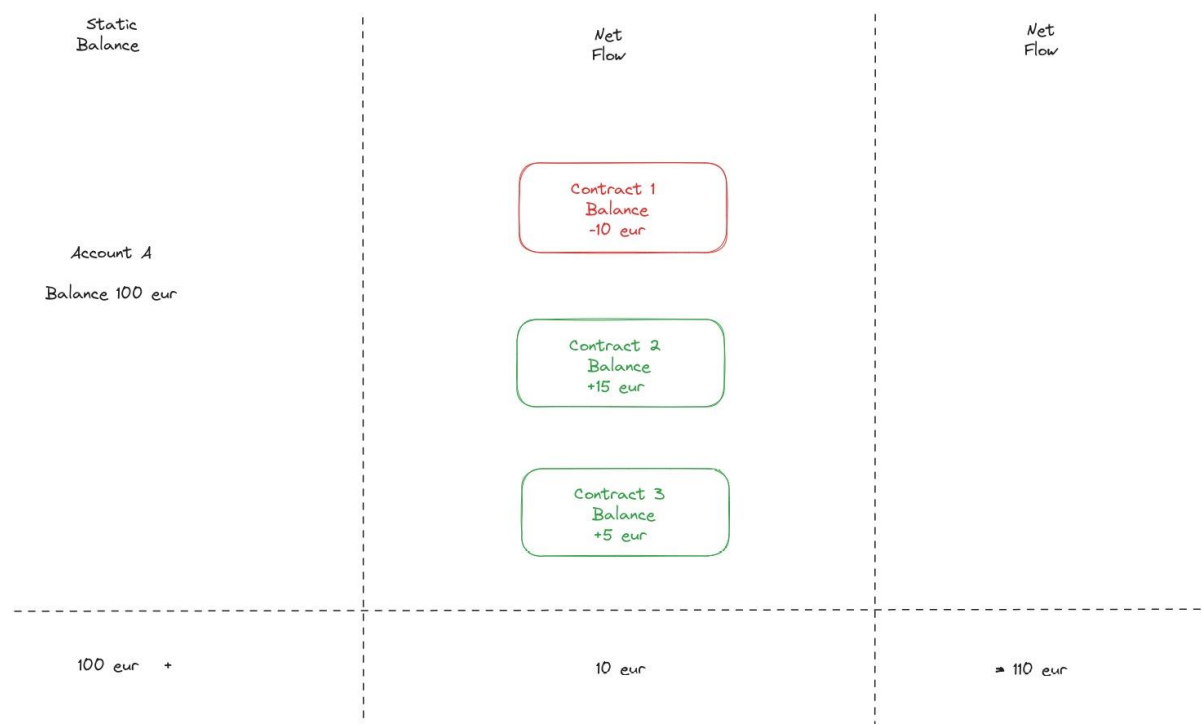
Updating a Payment Contract

When an account creates, updates, or deletes a payment contract, the contract calculates and updates:

- New Net Flow Rate
- New Timestamp
- New Static Balance: is updated to the value of the Current Balance at the time of the update.
- The Real-Time Balance is reset to zero.

After the creation, update, or cancellation of a Payment Contract, the Real-Time Balance of the Payment Contract starts to change automatically (if the rate is different from zero). The new balance is calculated as the product of the time elapsed since the last timestamp and the net flow rate.

Since the only variable involved is time, the value of the Real-Time Balance is determinable without the need for continuous write or update operations on the balance.

The Current Balance is equal to the Real-Time Balance (which changes every second) plus the Static Balance (constant until a flow change). Consequently, when an account with a non-zero net flow rate displays its balance, it will see that it changes continuously with each reading.

Displaying a balance involves the computation of the formulas, expressed as a function of time, defined in the payment contracts.

This means that continuous transactions are not needed to update the balances. It is always possible to determine the elapsed time and calculate the balances as a function of time.

Summarising:

Static Balance	Initial Balance at the Last Timestamp
Real-Time Balance	Net Rate per second elapsed since last Timestamp
Current Balance	Static Balance + Real-Time Balance

Example:

Time	Description	Balances
T0 Timestamp T0 Elapsed Time = 0	Account A has an inititial Balance of 1000 eur. Account A starts a streaming with a flow of 0.01 eur/sec towards account B.	*Account A balances* Static Balance: 1000 eur Real Time Balance: -0.01 eur/sec * 0 seconds = 0 Current Balance: 1000 eur + 0 = 1000 eur

Time	Description	Balances
T0+1000 sec Elapsed time since the last timestamp 1000sec	Situation after 1000 seconds from T0.	Static Balance: 1000 eur Real Time Balance: -0.01 eur/sec * 1000 seconds = -10 eur Current Balance: 1000 eur + -10 eur = **990 eur** **Timestamp T0**

Time	Description	Balances
T0+1000 sec New Timestamp Elapsed time since last Timestamp = 0 sec	At the 1000th second, contract A changes the flow, bringing it from -0.01 eur/sec to -0.02 eur/sec The payment contract records the new state and updates the balances.	Static Balance: **990 eur** Real Time Balance: -0.02 eur/sec * 0 seconds = **0 eur** Current Balance: 990 eur + 0 eur = **990 eur**
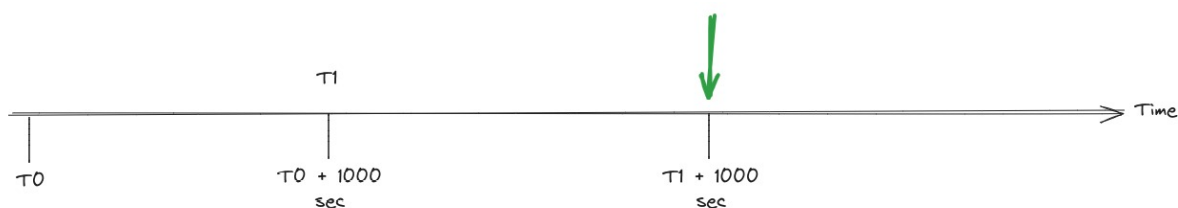
Time	Description	Balances
T1+1000 sec Elapsed time since the last Timestamp = 1000 sec	1000 seconds elapsed since T1	Static Balance: 990 eur Real Time Balance: -0.02 eur/sec * 1000 seconds = **-20 eur** Current Balance: 990 eur + 0 eur = **970 eur**

Time	Description	Balances
T1+1000 sec New Timestamp T2 Elapsed time since T2 =0 seconds	The account C sends a Stream to account A of 0.04eur/sec	Balance Account A: Static Balance: **970 eur** Real Time Balance: incoming:(+0.04 eur/sec + outgoing: -0.02 eur/sec) * 0 secondi = **0 eur** Current Balance: 970 eur +0 eur = **970 eur**
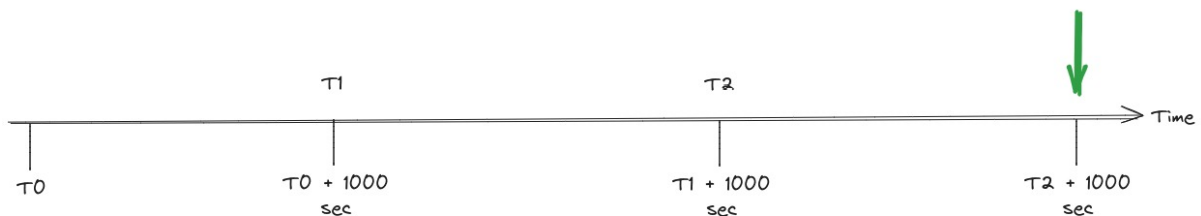
Time	Description	Balances
T2+1000 sec Elapsed time since T2= 1000 seconds	1000 seconds elapsed since T2	Account A Balances: Static Balance: 970 eur Real Time Balance: +0.02 eur/sec * 1000 seconds = **20 eur** Current Balance: 970 eur + 20 eur = **990 eur**

Time	Description	Balances
T2+1000 sec Elapsed time since T2= 1000 seconds New Timestamp T3. Elapsed time since T3= 0 seconds	At T3 (account C closes the stream and account A closes the stream)	Account A balances: Static Balance: **990 eur** Real Time balance: 0 * 0 = 0 eur Current Balance: **990 eur**

Protocol Features:

The protocol allows for the agnostic representation and transfer of any type of asset or value.

The units to be transferred can be created:

- In native mode (natively supporting real-time accounts)

- In 1:1 wrap mode (to allow existing assets to function in the real-time protocol)
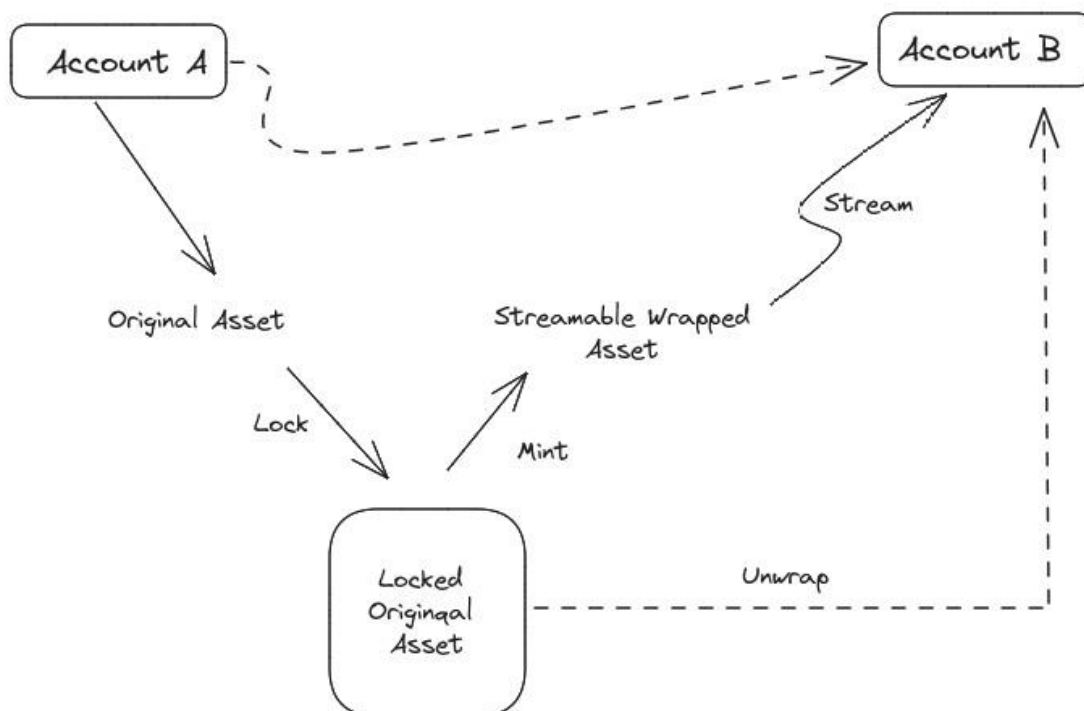
EIP 1622

The idea of replacing chunk payments with a money stream, independent as continuous payment over a finite period of time, has been discussed in Ethereum since 2018 with the EIP 1622 by Paul Berg. The idea was to use block numbers as a proxy of time to continuously update balances.

The following points describes the standard:

- The sender sets up a smart contract.
- The sender can interact with the contract and start the stream by depositing funds for
  streaming.
- The recipient can withdraw money from the contract based on its ongoing solvency (payment rate * (current block height - starting block height)).
- The stream terms can be updated if both parties agree (payment rate, length, etc.).
- The stream can be stopped at any time by either party, i.e., either the recipient or the
  sender.
- If the stream ends and is not stopped beforehand (either by the recipient or the sender) the recipient is entitled to the withdrawal of all streamed funds.

It is important to note that the proposed rules can be used as general guidelines, and not

necessarily be followed when developing a money streaming protocol.

Blockchain Timestamp

To understand better what means 'to use block numbers as a proxy of time' as described in the EIP 1622, we have to understand how the blockchain works.

A blockchain system is chronologically enforced as each transaction hash contains the timestamp of the previous block of transactions, forming a chain of blocks.

Every time a block is added to the chain, we can know for certain not only the data of a record's timestamp but that no one can manipulate it as well.

The blockchain timestamp can then be seen as a global variable, decentralised and immutable and everyone can refer to it.

The value and use cases for this kind of decentralised and immutable timestamping are limitless.
In fact, the adoption of blockchain-based timestamping can already be seen across multiple sectors and industries worldwide. It can be used for governance, trading, payments, insurance, supply chains, and it is at the base of Streamable Finance.

Example: Timestamp and DeFi

Thanks to the blockchain timestamps, it is really easy to keep track of the time elapsed in a blockchain.
The time difference between two blocks is in fact:

Time Diff = Current Timestamp - last Timestamp.

Most of DeFI projects use this to reward users over time for providing liquidity.

So, if for example we have a want to reward an user for providing liquidity to a system over time we can simply calculate:

Reward amount = Staked Amount * Reward Rate * TimeDiff / RewardInterval

Where usually:

- Current staked Amount: staked amount *stake fee — unstaked amount *unstake fee
- RewardRate: APY %
- RewardInterval: 365 days
- Time Diff = Current Timestamp - last Timestamp.

So, as we can see a DeFi system is able to pay out rewards in function of time elapsed in a blockchain.

EIP-1822 and ERC-777

Other two EIP need to be known to get a full technical background for our solution: EIP-1822 and ERC-777.

ERC-777 is a fungible token standard created to improve the existing ERC-20 standard. The standard introduces hooks.

Hooks are a function described in the code of a smart contract. Hooks get called when tokens are sent or received through the contract. This allows a smart contract to react to incoming or outgoing tokens.

The hooks are registered and discovered using the ERC-1820 standard.

The good thing about ERC-777 is that the tokens created with this standard can be interacted with as if they were ERC-20 tokens.

Streamable Finance uses an extended version of the ERC777 standard - retro compatible with the ERC20 standard to implement real time finance capabilities - reading the balance as result of a calculation and not from a static mapping.

This calculation is the sum of functions and static balances at a given time.

EIP	Description
1820	This standard defines a universal registry smart contract where any address (contract or regular account) can register which interface it supports and which smart contract is responsible for its implementation.
777	This standard defines a new way to interact with a token contract while remaining backward compatible with ERC-20. It defines advanced features to interact with tokens. Namely, *operators* to send tokens on behalf of another address—contract or regular account—and send/receive *hooks* to offer token holders more control over their tokens. It takes advantage of ERC-1820 to find out whether and where to notify contracts and regular addresses when they receive tokens as well as to allow compatibility with already-deployed contracts.

The protocol checks the user state, nets streaming agreements etc and calculates the reltime balance based on the timestamp.

Is it really streaming then, is it really settled or just calculated?

The flow it's continuously settled. The money is really flowing between senders and receivers. Every second the sender balance is decreased and the receiver balance is increased. The sender can't access anymore the assets that have flown out, while the receiver can, so the payment is really settled.

Payment Streams Implementation

Wrapping up what we have described in the previous paragraphs, we understand that we can create an extension of an ERC20 token able to read the balance from a function instead of a static mapping, and that this function can be expressed in function of time.

Once a persistent 1820 registry contract is deployed, the process of making a deposit translates into wrapping existing tokens (to give them extended functionalities) and allow them to be sent in a stream on-chain.

EIP-1620 describes the most intuitive flow of payment: a constant payment over time as

```
payment rate * (current block height - starting block
height)
```

 A constant payment is in fact:

<div align="center">

Flow Rate * Time

</div>

A use-case example:

Let us assume Bob has some streamable DAI (strDAI) and wants to send 1000strDAI/month to Alice. The User Bob would have their address, e.g., "0xbbb....", and their token, which is the address of the streamable token (strDAI.address).
Bob would then need to start a flow to a specified address,i.e., Alice's address.
A recipient for the userBob.flow would have to be defined (recipient address aliceAddress "0xaaa......").

Then, the flow rate would have to be set – in this case, it would be "385802469135802" (1000 strDAI/month).

Flow rate calculation (per month, x being the amount of streamable token to send per month) month) =

$$\frac{X}{3600} * \frac{1}{24} * \frac{1}{30} * 10^{18}$$

Real-time Balance

Once the user decides the rate (units of currency / units of time) and the receiver the flow just starts with a single transaction, and keeps going forever (unless it's stopped, changed or the sender goes out of balance for the streamed currency).

All without further transaction and gasless for the reason we explained before.

At any time, the sender and the receiver will see their real time balance changing.
A real time balance is, in case of a single stream between a sender and receiver:

$$Real\ Time\ Balance = FlowRate * Time + Static\ Balance$$

Or in case of multiple streams:

$$Real\ Time\ Balance = \sum_{i}^{n} FlowRate(i) * Time + Static\ Balance$$

Composable flows

Since a real time balance is expressed in terms of composable functions over time, we can basically create as many functions as we want to describe or model a payment flow.
At the time of writing, even if several types of flows are being developed, we have in production just one type: a constant flow of money.

In the future, when new type of flow will be usable, the full formula will be:

$$Real\ Time\ Balance = \sum_{i}^{n} FlowRate(i) * Time + Static\ Balance + Other\ Type\ of\ Flows$$

At any given time, the system can net inflows and outflow and display the real time balance.

Cash flow projection

At any given time, the system can net inflows and outflow and display the real time balance. Also, the system is very simple to calculate projections about the cash flow. For example, it can easily display for how long the current balance can sustain the current outgoing flow indicating the exact time in the future when the balance will reach zero.
This is very useful and can be used to auto top up the balance maximising the capital efficiency.

Types of Streams

Our system implements several types of financial streams alongside continuous flows.
Here's a list of all the possible streams:

Continuous Stream

The stream continuous to run until the senders stops it or because of lack of sufficient funds.

Exact Amount Streams

The sender specifies the total amount of money to be streamed. The stream automatically closes when this amount is reached.

The sender can set a minimum threshold. This ensures a guaranteed transfer even if the sender stops the stream or because of lack of sufficient funds for the total amount.

Exact Duration Streams

The sender specifies the duration of the stream at a specific rate.
A minimum transfer amount can be set as a safeguard. The streams automatically closes when the specified amount of time has passed.

Adaptive Streams

The sender authorizes a third party to debit their account based on predetermined parameters (such as maximum amount, duration, flow rate, and currency).
The receiver can modify the flow within the allowed parameters until the authorization is revoked.
This enables real-time billing for usage-based services (e.g. utilities) and offers a cost-effective alternative to recurring card or direct debit payments.

User Cases

Moving from static ledgers to real time finance will allow people to unleash the real power of money. Money flows will become programmable, fluid, and it won't be static and moved only by transactions.

Almost any aspect of finance, payment, investing, saving, borrowing, lending and insuring can be "rewritten" or improved by introducing streaming and real time finance.

Here some examples of possible applications:

New Payment Applications

Pay-on-demand

Getting paid by the second (pay on demand), no more waiting for payday.

Real time payments used for salary are probably the most understandable and useful user case.

Using a stream to pay an employee or a consultant will reduce the amount of recurring pay-out transactions and will make the value exchanged closer to the value given.

Receivers will be able to access their salary anytime and won't have to wait for the end of the month to use the funds.

Once they receive a stream, they can also immediately start to spend it and be able to see their real time balance on the system dashboard, getting a better understanding of their financial abilities and getting better tools to control and plan the spending.

Pay-per-use

Pay for membership, rent, leasing, any pay per use. Work without working capital or without waiting for payments.

Using streams instead of standard payment maximises the capital efficiency.
Once a stream is received, for example a salary for the stream, the receiver can immediately start an outgoing stream without the need to wait to receive the full salary.
A dashboard will net the flows and shows if the cash flow is positive or negative, and if negative it will show for how long the current incoming stream or balance will be able to maintain the outgoing flows.

This way of payment applies particularly well on continuous expenses, like memberships, leasing or for example to pay the rent.

These expenses, generally paid with recurring transactions, can easily be replaced by streams that will maximise capital efficiency eliminating the needs of recurring transactions.

Stream instead recurring

Forget recurring payments and deadlines, better control of the spending

A recurring payment (also known as a 'continuous payment authority') is an automatic regular payment which is set up using your debit or credit card. You might use one to pay for costs such as car insurance or a magazine subscription. You might think it's the same as setting up a direct debit. But it's not, and the process can easily go wrong.

The major problem with a recurring payment is it can only be cancelled by the company you set it up with. In other words, you have no control whatsoever, while the company you make the payment to sits in the driving seat and has regular, legal access to your credit or debit card.

If you want to stop the payment, you'll have to rely on the company's willingness to accept your instructions. This is completely different from direct debits or standing orders which give you the right to cancel payments instantly. With a direct debit you authorise your bank to pay money to a third party, but you can easily remove permission by asking your bank to cancel the instruction, and the company can do nothing about it.

Also, it happens very frequently to forget a recurring payment in place.

Replacing recurring payments with streams, the user will always be in control of the stream and the stream will be easy to identify in the dashboard.

Since the flow is considered in real time to calculate the net cash flow, the user will have a better control of his expenses.

Pay-now-buy-later

Revolutionise "pay now buy later", instalments payments, direct debits

With Streamable Finance all the applications that currently use recurring transaction can be reinvented using streams of money.

Streams represent a more intuitive, manageable and efficient way to pay for any recurring or continuous service.

Some aspects of the contract regulating the consumer-provider relationship can be coded and enforced in the payment itself, reducing the complexity and the problems that arise in case of disputes.

Better Payment control and management

Capital efficiency

Maximise capital efficiency (redirecting "spare" capacity to an investment pool, adjusting flows to get the optimal outcome)

The system nets in real time incoming and outgoing flows and available static balances and constantly shows the result on the dashboard.
The user can easily understand how his/her finances are going and plan accordingly.
In case of net cash flow, he/she can for example redirect "spare" capacity (net cash flow) in streaming to an investment platform (e.g. Streamable Invest).

A user will be able to set automatic rules that will be activated when a specific threshold of positive or negative real time cash flow will be triggered.

For example, will it be possible to set a rule to send a stream to a saving wallet when net cash flow is above a threshold or to stream from a saving wallet to an expense wallet when there's negative cash flow.

Better visualisation and representation

Real-Time balance

Visualise your real-time balance (netting in real time incoming and outgoing flows)

Even with thousands of incoming and outgoing flows and hundreds of different static balances, the system can easily summarise the net cash flow for a single or for a group of wallets/accounts in real time.

Flows can be queried by tag and group to better understand their impact on the cashflow.

With all these data, the system can also do accurate projection (at the second) of the cash flow needs.

With traditional finance it's impossible to reach such a level of representation and accuracy on the control spending.

New borrowing, lending and credit applications

Credit safer

Reinventing Funding, credit and borrowing (constant stream of lending instead of lump sum, the lender can close a stream if some conditions are no longer valid or satisfied).

Usually, with traditional finance lending happens in lump sums. If I borrow 100k$, to be spent during the year, I usually receive the entire lump sum at the issue of the loan.

With streams, we can reinvent lending. Borrowings can be given in streams instead of lump sums reducing the credit risk for the lender and better fitting the funding need of the borrower.
The lender could, for example, stream 100k$ during the year to the borrower with a better rate for the borrower.

Also, at any time, if the borrower is not reliable anymore, the lender can stop the outgoing loan.

Since a stream is a programmable flow of money, many other conditions and payment variables could be implemented in the stream, for example the payment of a penalty in case the borrower interrupts the pay-back stream.

To increase the creditworthiness, the borrower could give control of his/her own incoming streams (like the salary for example) as guarantee for a loan to a lender.

The incoming salary (if streamed) could be automatically set to repay a loan in stream, maximising efficiency.

Credit Score

A new type of credit score can be created.
Customers can demonstrate analytically their instant and over time average financial capacity.
Data could be shared instantly with lending providers facilitating the borrowing and lending process.
Borrower could give controls to some streams to guarantee undercollateralized lending.

New investment applications

DCAing

DCAing into a position every second, using your available or spare net cash flow

> With Streamable Finance, it will be possible to program a flow to an investing application.

> The application could invest the funds received continuously *dollar cost averaging* into a position without the need of doing hundreds of transactions.

> Many real-time investing applications can be built thanks to Streamable Finance and this can challenge the way we have experienced investing so far.

> Lump sum transfers and deposits can be substituted with streams that are constantly invested.

> By using streams, not only we exchange value more efficiently, but we can leverage the fact that streams are composable.

> For example, it would be possible to stream into an interest-bearing position instead of periodically transferring lump sums.

Optimize the flow

Automatically optimise your available flows (directing them to saving, investing etc)

> Instead of putting aside a fixed amount each month, any positive cash flow can be automatically redirected to a savings wallet or account and can be adaptive depending on the effective net flow.

> With Streamable Finance it will be possible to program how flows are spent and redirected in case some threshold is reached optimising the capital efficiency.

Other possible applications

Royalties

Distribute royalties to the owners (music streaming payments etc)

With real-time finance, Youtube and other video streaming platforms could pay authors for each second of video that is streamed, while Spotify could pay artists for each track that is streamed.

In general, any pay per use could be better implemented with a real time programmable flow of money instead of a payment with traditional finance.

Stream Assets

Not just payments, Stream Pay can stream assets, property rights, royalties etc (revolutionise mortgages etc)

Streamable Finance can stream any type of tokenized asset.
A payment stream can be sent in exchange of tokens that represent a property and a a set of rules can stop the exchange programmatically and automatically once one of the two flows stops.

Many aspects of an exchange contract could be programmed and enforced directly in the payment protocol maximising efficiency and security.

This will bring to a market of tradable cash flow assets and will be possible to trade future cash-flows, like employment positions, consultancy contracts etc.

Competitive landscape

Streamable Finance vs Crypto Competitors

Currently there are two crypto competitors in the space. The number is quite small if we consider that there are more than 10,000 tokens and related projects on Coingecko at the time of writing.

The two main competitors are Sablier and Superfluid.

Sablier is "the protocol for real-time finance". It can transfer value every second. It is currently built on ethereum and as the main limit it has the fact that the money needs to be locked in a contract before the streaming starts.
In other words, if you must stream 100k DAI you need to have the 100k DAI and lock them, even if you are planning to stream them for the next two years.
This makes Sablier more a proof of concept than a real usable and flexible protocol.

The second competitor is Superfluid.
Superfluid is first and foremost a *protocol* built with developers in mind. Superfluid proposes a new token standard, with the power to describe cash flows and execute them automatically on a chain over time in a non-interactive way.
Superfluid is very interesting because, differently from Sablier, it does not require to lock money in a contract to be streamed. So, using the same example as before, if you are planning to stream 100k DAI over 2 years you don't need to have 100k DAI but just enough DAI to allow the flow to stream and remain open.
Superfluid implements two types of contracts at the time of writing: CFA and IDA.
CFA is a constant flow of money, while IDA implements a scalable one-to-many distribution mechanism.
With this mechanism, users that subscribe to it will instantly receive tokens *in proportion* to the number of units they have over the total outstanding units. This is done all at once with a fixed gas cost.

Superfluid's mission is to create a smart contract framework on EVM networks that can be used for developers to build applications.

Difference between Streamable Finance and crypto competitors

Streamable Finance mission is to build an ecosystem of solutions for streamable finance.
Even if we are building our own protocols and low-level solutions (like Superfluid), our focus is more on the applicative side of it. Our solutions are not blockchain only, our main goal is to integrate Streamable Finance solutions in everyday life in a compliant and secure way. We

will have applications in the DeFi space but our main goal is to encapsulate crypto technology in our fintech stack for a seamless experience for non-crypto users.

We are planning to use competitor's protocols and solutions whenever necessary and integrate it in our streaming solutions via proxy. We will also release an SDK for our low-level solution and provide proxies to our services.

We strongly believe that the more people will build their own solutions on our protocol or on the competitor's protocol the more successful the streamable finance will be in the future.

We all believe in decentralisation and composability of services and we are against fragmentation.
We also want to give our customers a secure and compliant framework where to use these services with confidence.

Streamable Finance vs Traditional Fintech

At the time of writing we can proudly say we are the only fintech company with a working streaming protocol in DeFi and FIAT streaming service fully compliant. We are not aware of any other company moving steps into this new market.

PART II

Implementation

Streamable Finance Solution Overview

The goal of Streamable Finance is to bring streamable payments and programmable flows of money in everyone's life in a safe and compliant environment.

Even if blockchain will be the settling engine of the system, the main scope of the project is to create a set of applications and a streaming infrastructure to stream FIAT money and to be used by anyone.

The project is quite vast and ambitious and so it needs to be broken down and implemented in steps that we will describe in the following paragraphs.

As explained in chapter 4, Ethereum is a valid choice to implement a system for the real time economy.
Ethereum is an EVM network, and it is compatible with all the other EVM networks (in terms of code portability).
In the future we will operating cross chain between several networks, but to start we would like to pick up the network that offers the best characteristic.

Blockchain Choice

To choose the blockchain were to implement Streamable Finance, many aspects have been considered:

Factor	Best Blockchain
Fees (lowest)	Binance Smart Chain, Avalanche, and Solana
Smart contract Language: Solidity	Avalanche, Binance Smart Chain, Ethereum
Rust and C++	Polkadot, Solana
Abstraction Layer	Avalanche, Binance Smart Chain, and Ethereum use Solidity Compiler. Polkadot has a built-in Substrate contract pallet and Solana uses an LLVM compiler.
Usability	The largest number of projects are for Ethereum – more than 3000, followed by Pokadot with about 400 projects, and Binance Smart Chain with morethan 180 projects.

WEB3 Injection	The most popular injection is MetaMask, which is used by Ethereum and can be modified for Binance Smart Chain. Other Blockchain technologies have their web wallets.
Complexity	Avalanche and Polkadot both use complex structures with multiple chains or parachains. Binance Smart Chain and Ethereum use Ethereum Virtual Machine. Solana – single SHA-256 hash chain.
Portability	Contracts can be migrated from EVM-compatible blockchains to other EVM-compatible blockchains.

Comparison of Candidate Blockchains: (April 2021)

Taking into consideration the analysis and comparison of various blockchains, it would appear that Binance Smart Chain Blockchain would be the higher-ranking choice of technology for development, as it is one of the best choices (or the sole superior one) in terms of fees, smart contract language, abstraction layer, Web3 injection, and complexity.

Stream Token

Value Proposition

$STREAM is the native token of the protocol.
It is a utility token, used in any product of the Streamable Finance ecosystem.
$STREAM holders receives discounts and benefits for holding the tokens.
Token Holders have different benefits depending on the product they use. For example, they can boost their yield if they hold tokens in Streamable Invest, or they can get discounts for ramping in or ramping out fiat from the es-Currencies platform.

1   $STREAM stakers share collected platform fees (swap and unstaking penalty fees).

2   $STREAM holders get fee discounts in products utilizing Streamable Finance streaming protocol (better conditions in Streamable Invest, reduced swapping and minting fees).

3   $STREAM is paid as cashback tokens for purchases or transactions and allows users to buy products and services at discounted rates within the streaming economy.

Fig.1: Stream token utility

Token Supply and Emission

The $STREAM token supply is one billion (1,000,000,000) tokens to be issued over five years.

Fig.2: Token Distribution

Token Distribution

8.75%	Liquidity provider rewards. Continuously minted over five years with a progressively decreasing rate (Liquidity pools, Stream Liquidity, Native es-Currencies LP rewards)
9.7%	Team/development fund
15%	Community incentives
10%	Partnership incentives: airdrops, partnerships, grants
5%	Development
5%	Marketing
0.3%	Bootstrap pool
1%	Seed
25.25%	Other networks – to be allocated
15%	Private sale
5%	Treasury

Lp Rewards distribution

- STREAM pools   4.75%
- Native es-Currencies LP   1.5%
- Other pools   2.5%

Rewards for es-Currencies pools are distributed based on the overall TVL of the es-Currencies pools, therefore the APYs of these pools are identical.

The liquidity provider rewards will be as follows:

- 40% of STREAM supply as rewards within year one
- 15% of STREAM supply as rewards in year two
- 10% of STREAM supply as rewards in year three
- Remaining rewards: Each month: 2% of the remaining supply

Initial Pools

The DEX has been deployed in BSC with these initial pools:

Current Pool	Type	Type Distr (%)	Allocation (%)
Base Pool	Pools	2.5	1.25
Base - esUSD	Pools	2.5	1.25
esEUR - esUSD	native	1.5	0.50
esGBP - esUSD	native	1.5	0.50
esCHF - esUSD	native	1.5	0.50
STREAM - esEUR	token liquidity	4.75	0.79
STREAM - esUSD	token liquidity	4.75	0.79
STREAM - wBNB	token liquidity	4.75	1.58
STREAM - USDT	token liquidity	4.75	1.58

BSC Allocation

We will be distributing 25% of the Liquidity Provider Rewards on BSC.
The remaining 75% will be distributed in other networks.
The initial total supply on BSC is 747.5M tokens (LP, Team, Community Incentives, Partnership tokens, Development, Marketing/BD, Private Sale, Bootstrap Pool).
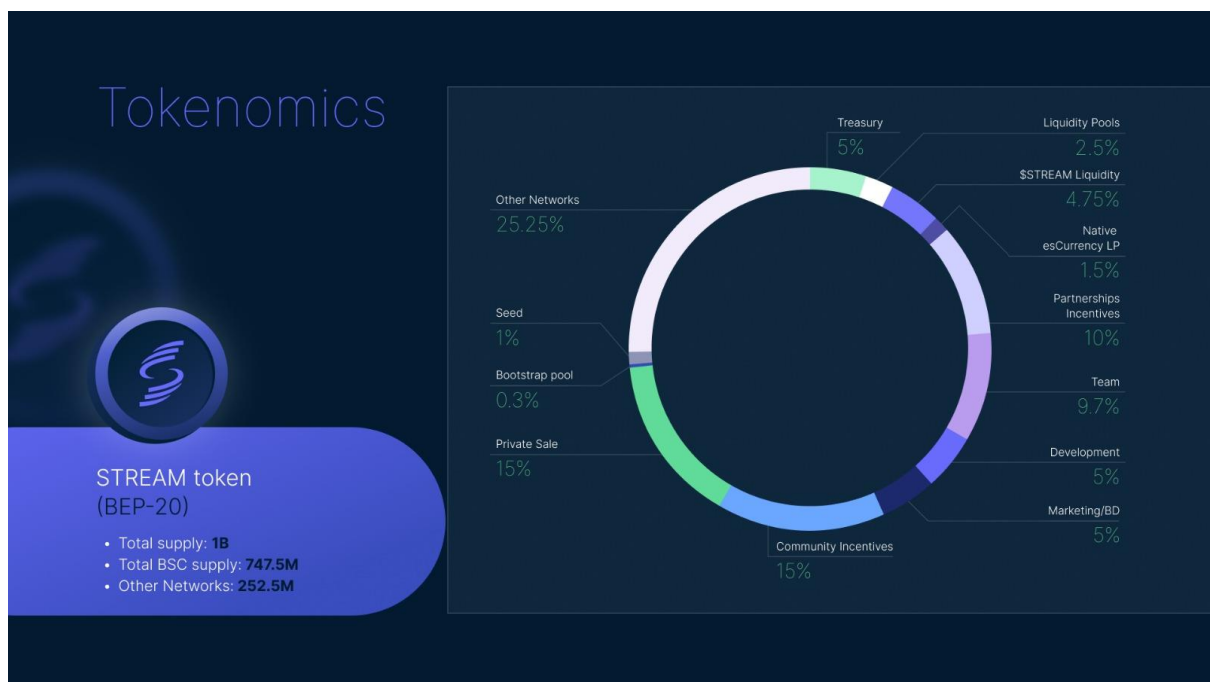
Fig.3: Tokenomics

Remaining Token

The remaining token to be allocated in other networks are 252.5M STREAM tokens.

Bridging on other networks

When the system will be deployed on other networks, the STREAM token will be bridgeable.

Token Allocation and vesting

Allocation	Tokens (Million)	Vesting
Liquidity Pools	25.00	40% 1st year, 15% 2nd year, 10% 3rd year followed by 2% of remaining tokens montly.
$STREAM Liquidity	47.50	40% 1st year, 15% 2nd year, 10% 3rd year followed by 2% of remaining tokens montly.
Native esCurrency LP	15.00	40% 1st year, 15% 2nd year, 10% 3rd year followed by 2% of remaining tokens montly.
Partnership Incentives	100.00	No cliff, ETA Q3 2024
Team	97.00	6 month cliff followed by 2.02% monthly for 48 months.
Development	50.00	6 month cliff followed by 60% 1st year, 30% 2nd year and 10% 3rd year.
Marketing/BD	50.00	6 month cliff followed by 60% 1st year, 30% 2nd year and 10% 3rd year.
Community Incentives	150.00	No cliff, 2.8% monthly for 36 months.
Private Sale	150.00	6 month cliff followed by 2.1% monthly for 48 months.
Bootstrap Pool	3.00	No cliff
Treasury	50.00	6 month cliff followed by 2.1% monthly for 48 months.
Seed	10.00	25% TGE, 2 months cliff then linear unlock in 18 months.
To be allocated	252.50	TBD
Total:	**1000.00**	

Fig.4: Token Emission and Allocation

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DeX - Token Rewards Pool and Staking Pool

Liquidity providers receive STREAM rewards with a vesting period of 3 months. Rewards can be claimed before the end of the vesting period but are subject to a 50% early exit penalty.

STREAM from the early exit penalty is distributed to the locked staking pool. The most loyal STREAM holders will stand to gain the maximum benefit upon conclusion of the 3 months vesting period.

The staking pool receives trading fees as well as the STREAM penalty revenue from people who exit the reward pool early (before the end of the 3 months vesting). The staking pool has no mandatory lock-up.

All the tokens distributed in DeFi can be used in CeFi products to get better conditions or rates.

Useful Links

Stream Token (BSC Scan)	https://bscscan.com/address/0xa2741bec3115a4cc43bbccdc351e21df4c6c0e31
Explorer	https://explorer.streamablefinance.com/
Token Vesting	https://app.unvest.io/projects/56/0xa2741bec3115a4cc43bbccdc351e21df4c6c0e31/locks
Pools	https://explorer.streamablefinance.com/statistics/pools
Tokens Contracts	https://prod.stream.superhow.net/api/api/v1/tokens

Roadmap

For an updated situation about the released products and MVPs and the latest roadmap please visit
www.streamablefinance.com

Other Product from Streamable Finance

Streamable Finance: A Deep Dive into its Product Suite

Streamable Finance is revolutionizing the world of finance by introducing a suite of innovative products designed to facilitate the seamless flow of digital assets. Let's explore the core components of their offering:

1. StreamPay Protocol:
- The foundation of Streamable Finance, this protocol enables the streaming of digital assets. Imagine paying for a service in real-time as you use it, or receiving your salary in a continuous stream rather than in discrete chunks. This is the power of StreamPay.

2. Adaptive Stream:
- This feature introduces flexibility into the streaming process. With prior authorization from the sender, the receiver can modify the parameters of the stream. This could involve adjusting the flow rate, duration, or even redirecting it.

3. EsCurrencies:
- These are tokenized, streamable forms of electronic money. They can be minted or burned as needed, providing a dynamic and responsive medium of exchange within the Streamable Finance ecosystem.

4. Wrappers:
- Not all digital assets are inherently streamable. Wrappers address this by encapsulating existing assets, making them compatible with the StreamPay protocol and enabling their use in streaming transactions.

5. DEX and Liquidity Pools:
- A decentralized exchange (DEX) and associated liquidity pools facilitate the trading and exchange of various digital assets, including EsCurrencies. This ensures a vibrant and liquid marketplace within the Streamable Finance ecosystem.

6. StreamPay Button:
- This merchant SDK empowers businesses to integrate StreamPay directly into their platforms. This allows them to accept payments in real-time for pay-per-use services, subscriptions, and more.

7. EsConnector:
- This component acts as a bridge between different financial realms. It links an EsCurrency address with traditional fiat accounts (IBAN, bank accounts, wallets) and cryptocurrency wallets, facilitating seamless interoperability.

8. EsRamp:

- This system serves as an on-and-off ramp for fiat currencies. It enables users to convert fiat into EsCurrencies and vice versa, facilitating the integration of traditional finance with the Streamable Finance ecosystem.

In essence, Streamable Finance is building a comprehensive infrastructure for the future of finance. Their products enable a new paradigm of real-time, flexible, and efficient transactions, blurring the lines between traditional and decentralized finance.

Streamable Finance Project

Streamablefinance.crypto is the only official website for Streamable Finance and point of contact for the Streamable Finanance Project. Any other website claiming to represent Streamable Finance, including the .com version may be operated by unauthorized partners, third parties, scammers, or impersonators. These entities may have limited or no rights to use Streamable Finance software or products. To ensure you are interacting with the legitimate Streamable Finance and have full access and rights to use our products and services, please use the following
chat: https://chat.blockscan.com/index?a=0xb34eaaad2a3e71c4059e71d290be05dc59093c63 for speaking to streamablefinance.crypto
This will guarantee you are paying the correct fees and working with authorized representatives.

Commercial use of Streamable Finance

Legal Agreement for Commercial Use of Streamable Finance

This Legal Agreement ("Agreement") governs the use of Streamable Finance software and products for commercial purposes. By accessing or using Streamable Finance for any commercial application, you ("User") agree to be bound by the terms and conditions of this Agreement.

1. Exclusive Ownership and Authorization
Streamable Finance is exclusively owned and operated by streamablefinance.crypto. Any use of Streamable Finance software or products for commercial purposes requires explicit authorization from streamablefinance.crypto. Users must contact streamablefinance.crypto through the official communication
channel: https://chat.blockscan.com/index?a=0xb34eaaad2a3e71c4059e71d290be05dc59093c63 for speaking to streamablefinance.crypto

2. Fees and Payment

Commercial use of Streamable Finance is subject to fees as agreed upon between the User and streamablefinance.crypto. All fees must be paid to the designated wallet address: streamablefinance.wallet.

3. Unauthorized Use and Consequences
Failure to obtain authorization or pay the agreed-upon fees constitutes unauthorized use. Unauthorized use may result in:

• Immediate disconnection from Streamable Finance services.

• A ban from further use of Streamable Finance.

• The locking of any funds held within the Streamable Finance system until the agreed fees are paid.

4. Code-Enforced Agreement

User understands and agrees that this Agreement is enforced through code and cryptography. This means that violations of this Agreement, including failure to obtain authorization or pay fees, may result in automated consequences with limited or no recourse.

5. Disclaimer of Warranties

Streamable Finance is provided "as is" without warranty of any kind, express or implied, including but not limited to any warranty of merchantability, fitness for a particular purpose, or non-infringement. streamablefinance.crypto makes no warranty that Streamable Finance will meet the User's requirements or that its operation will be uninterrupted or error-free.

6. Limitation of Liability

In no event shall streamablefinance.crypto be liable for any indirect, incidental, special, consequential, or punitive damages arising out of or related to the use of Streamable Finance, even if streamablefinance.crypto has been advised of the possibility of such damages.

7. Dispute Resolution

Given that Streamable Finance operates primarily through self-executing smart contracts, disputes are generally resolved through the fulfillment of the Agreement's terms, specifically the payment of agreed-upon protocol fees. streamablefinance.crypto is bound by the code of the smart contracts and cannot deviate from the execution parameters defined therein. Users who do not understand or agree with the functionality of the smart contracts should not use Streamable Finance.

8. Solution Development

If the User develops any solution utilizing Streamable Finance, streamablefinance.crypto reserves the right to create and deploy a similar solution without any obligation to compensate the User.

9. Fee Increases

The fees charged for User services are subject to increase every April, starting in April 2025 for most Users.

10. Project Scope

The project scope and services provided by Streamable Finance are exclusively those defined below:

• Streaming Protocol
• Liquidity Pool, DeX
• esCurrencies (MiCa compliant tokenized e-money)
• Streampay Button (button able to send a flow of money to a merchant that implements any pay-per use payment for a prodict, service or resource)
• Adaptive Streaming
Streamable Finance Tokens and other contracts as defined below:

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StreamerHelpers: 0xaBAe83C1Dc426c393ac61b740B762c041BD72F78

ProtocolFeePercentagesProvider : 0xcf99bFD892Bb49025a7cB69691156Da77C349380

ComposableStablePoolFactory: 0x7Fe2F9e66E8dDFA5665cacf8cDA88D887a0A2A8A

Deployed WeightedPoolFactory: 0xEA4dc6bA1a3754C999414b3F44eC3E2774d3D2e1

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https://api.thegraph.com/subgraphs/name/streamable-finance/streampay-bsc

https://api.thegraph.com/subgraphs/name/streamable-finance/threshold-scheduler-bsc

https://api.thegraph.com/subgraphs/name/streamable-finance/scheduler-bsc

Modules:

sdk-core @streamable-finance/sdk-core@0.5.5-rc.5

sdk-redux @streamable-finance/sdk-redux@0.2.2-rc.4

swap-sdk @streamable-finance/swap-sdk@0.1.5

js-sdk @streamable-finance/js-sdk/0.6.2-rc.1

the list above may be expanded/detailed under streamablefinance.crypto. ipfs website.

11. No Rights from Contributions

Any sponsorship, contribution, payment, paid or unpaid work involvement with streamablefinance.crypto or in the Streamable Finance project does not grant the User any rights to the protocol, its intellectual property, or access to protocol fees unless agreed with streamablefinance.crypto and activated/enforced in a smart contract or other onchain code.

12. Entire Agreement
This Agreement constitutes the entire agreement between the User and streamablefinance.crypto with respect to the subject matter herein and supersedes all prior or contemporaneous communications, representations, or agreements, whether oral or written.

13. Severability
If any provision of this Agreement is held to be invalid or unenforceable, such provision shall be struck from this Agreement and the remaining provisions shall remain in full force and effect.

14. Contact Information

For any questions or inquiries regarding this Agreement, please contact streamablefinance.crypto through the official communication channel: https://chat.blockscan.com/index?a=0xb34eaaad2a3e71c4059e71d290be05dc590 93c63 for speaking to streamablefinance.crypto By using Streamable Finance for commercial purposes, you acknowledge that you have read, understood, and agree to be bound by the terms and conditions of this Agreement.

Questions?

https://chat.blockscan.com/index?a=0xb34eaaad2a3e71c4059e71d290be05dc59093c63 for speaking to streamablefinance.crypto