



O U R T E L L

## **Whitepaper v4.2**

Next generation iterative sentiment  
analysis for optimal cryptocurrency  
trading

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## Contents

1. Introduction to ourTell.....	3
1.1.1 Overview.....	3
1.2 Current Use.....	4
1.2.1 Sentiment Analysts.....	4
1.2.2 Social Media Channels.....	5
1.2.3 Platform.....	5
2. Sentiment Intelligence Prediction Platform.....	6
2.1 Sentiment Analysis.....	6
2.1.1 Telegram.....	6
2.2 Token/Project Data.....	7
2.2.1 Telegram.....	7
2.3 Historical and Current Market Data.....	13
2.3.1 Bull/Bear.....	13
2.3.2 Trend/Technical Analysis.....	14
2.3.3 Volume Analysis.....	14
2.4 External Data Analysis (Influencers).....	14
3. Products.....	14
3.1 Sentiment Intelligence Prediction Platform.....	15
3.1.1 Overview.....	15
3.1.2 Tiers.....	15
3.1.3 ourTell Genesis Token.....	16
3.2 Sentiment Intelligence Fund.....	16
3.2.1 Overview.....	16
3.2.2 Fees.....	17
4. Token Metrics.....	17
4.1 Overview.....	18
4.1 Token Sale.....	18
4.1.1 Overview.....	18
4.2 Token Allocation.....	18
4.2 Funding Distribution.....	19
References.....	21

# 1. Introduction to ourTell

## 1.1.1 Overview

We provide a next generation, decentralized, iterative sentiment analysis for optimal cryptocurrency trading.

We use a system called Sentiment Intelligence which is a combination of sentiment analysis from real certified analysts, big data and machine learning in order to create an artificial intelligence platform which allows for market predications with near perfect information.

Financial markets are turbulent and require a huge vat of knowledge to even begin trying to predict outcomes. This is the case in the cryptocurrency market and is often even more severe due to the casual and uninformed nature of many traders.

Markets are moved in the cryptocurrency and blockchain sphere largely due to public perception. This is often left unknown in analysis and predictions. With a few common issues arising, sentiment data is:

- Severely under sourced
- Without context
- Misinterpreted
- Coerced/Inauthentic

Our Sentiment Intelligence platform combines all aspects of traditional market analysis and unifies it with unparalleled sentiment analysis. Millions of messages are sent in cryptocurrency groups every day, these messages are minded and analyzed by real humans. This helps on two fronts. Firstly, all data pieces are completely authentic and have occurred organically without any external party interfering, this allows for the most valid and genuine sentiment analysis to occur. Secondly, using real sentiment analysts instead of purely using machine learning allows us to ensure our model continually becomes more accurate and begins to connect the data points and how they interact with each other. Many of the common problems listed above occur when only using a ML model.

## 1.2 Current Use

### 1.2.1 Sentiment Analysts

In February 2017, 50 sentiment analysts were onboarded. Analysts had to have obtained a Bachelor's degree at a minimum in a related field in order to be eligible. From there, analysts underwent a 5 week intensive course and a written examination in order to qualify them to be a sentiment analyst on the platform.

As of April 2017 we have on boarded over 200 analysts in total, under the same rigorous conditions.

Currently, we have 230+ sentiment analysts working on the platform. We aim to have onboarded over 1000 sentiment analysts by the end of 2018 and remunerated them through our Proof of Sentiment protocol (discussed later in the paper).

Analysts work on fixed data pieces in order to enable optimizations and efficiency in review time. Each piece of data is reviewed by four analysts:

1. Working solely on the fixed data set
2. Working on data set and competitors
3. Working on unrelated data sets
4. Working on data sets with similar metrics but fundamentally different

The most intuitive way to understand the process is through example. Suppose we are analyzing an ICO for ExampleCoin and we are analyzing messages in their Telegram group. The analyst breakdown is as follows:

1. Working on the Telegram group of ExampleCoin
2. Working on the Telegram group of ExampleCoin and Telegram groups of its direct competitors
3. Working on the Telegram group of ExampleCoin and unrelated cryptocurrency Telegram groups
4. Working on the Telegram group of ExampleCoin and other cryptocurrency Telegram groups with similar metrics such as *fundraising goal, key dates, group size, group activity, group growth, etc.*

This allows for diverse opinions and different viewpoints preventing an echo chamber problem (Grimes, 2017). In doing so we are not training our machine learning model to learn biases of the individual or information biases.

## **1.2.2 Social Media Channels**

While we are optimizing our initial offering of the platform Telegram has been the sole source of sentiment data. We subscribe to the philosophy that "*The future belongs to those who learn more skills and combine them in creative ways.*" (Greene, 2012, p. 44). We believe in the merit of optimizing our current systems and ensure we derive the greatest benefit from them before moving forward.

Once we are happy and can sustain our Telegram sentiment analysis we will be moving onto other platforms. Namely:

1. Discord
2. Reddit
3. BitcoinTalk
4. 4Chan
5. Steemit (comments+upvotes)
6. Medium (comments+upvotes)
7. Twitter
8. Facebook

## **1.2.3 Platform**

Our predictions platform is currently operational and in beta testing. It combines all facets that could affect market outcomes and is able to make complete predictions with near perfect information. The prediction platform has been used for prediction with complete data in over 120 Initial Coin Offerings since October 2017.

# 2. Sentiment Intelligence Prediction Platform

## 2.1 Sentiment Analysis

Throughout our research and development we have encountered numerous forms of sentiment analysis methodologies and automated systems. All methods bearing their own merits and shortfalls as discussed in 1.2.1.

We continuously aim to improve and optimize our system and give the most contextual and complete analysis possible.

### 2.1.1 Telegram

#### 2.1.1.1 Users

Users on Telegram form the foundation for where all sentiment comes from. Naturally, this means that user analysis is paramount in order to understand what they are saying and determine the efficacy of their information.

#### 2.1.1.1.2 History

Messages are analyzed from our sentiment analysts and passed into our machine learning model. This model keeps a permanent and running score for each user and ranks the user based on:

- **Participation:** How wildly they participate in Telegram communities. Users that contribute more widely typically warrant a higher level of value.
- **Authenticity:** Whether or not the user contributes meaningfully or primarily advocates for a coin incessantly or promotes fear, uncertainty and doubt.
- **Age:** How long has the account been active. Typically, the longer the account has been active the higher we value their messages.
- **Accuracy:** How often does their sentiment result in what the eventual market outcome is. I.e. if they have a positive sentiment about ExampleCoin and the market outcomes turn out to be positive then the user has a positive accuracy. The more "picks" and sentiment we have from the user, the further we can establish their accuracy.

- **Vested Interest:** Does the user have a stake in the sentiment they are discussing. I.e. does the user own ExampleCoin when discussing it. This is only ascertainable if the user has directly mentioned it. Typically, users with a vested interest are less authentic.
- **Influence:** How much influence does the user have in the community. Users have varying influence and can move opinions/spark conversations more easily than others. Typically, these users have a higher value than those with low influence.

### 2.1.1.1.2 Messages

Messages are where we derive our actual sentiment data that forms the core of our sentiment analysis. While being integral, it has been kept as simple as possible to optimize the process. Working with all other metrics and sentiment metadata such as user data allow for a contextual and complete analysis.

- **Sentiment:** Does the message portray a positive, negative or neutral sentiment. This is ranked on a scale from -100:100 with -100 completely negative, 0 neutral, 100 completely positive.
- **Authenticity:** Is the message authentic or is it intended to "shill"/"FUD".
- **Visibility:** How much visibility will this message get. Factors included are group size, group responsiveness, time message sent.

## 2.2 Token/Project Data

### 2.2.1 Telegram

#### 2.2.1.1 Quantitative

##### 2.2.1.1.1 ICO Group

The actual ICO group on Telegram for the project is typically where most data is collected. Beyond raw sentiment data we capture other elements. Namely:

- **Size:** How large is the Telegram group. The size of the groups gives indications of the interest levels in the community.
- **Age/Growth:** We analyze how organically a group has grown based on its age and events that cause unexpected growth.
- **Bought/Fake Users:** We have analyzed hundreds of groups and have models to determine whether a group has fake user and bots. These methods included growth curve analysis and group activity/responsiveness.
- **Activity:** How much activity is there in the group in proportion to their users and other groups of similar size. Typically, this is indicative of how anticipated the ICO is. This metric is useless on its own. It needs to be combined with the sentiment that makes up the activity.
- **Responsiveness and communication:** How quickly do administrators respond to questions and is there often a state of "not knowing" in the group. Typically, the more openness and freedom of knowledge that is provided the better the performance of the ICO.
- **Trend/Pattern analysis:** We compare the trends and patterns in the ICO group against those in similar product fields and of similar size.

#### **2.2.1.1.2 Reach**

We determine the extent to which the project is talked about throughout ICO/Cryptocurrency groups in Telegram to determine the widespread knowledge/awareness of the ICO.

#### **2.2.1.1.4 Token Metrics**

##### **2.2.1.1.4.1 Allocation**

Does the token allocation reflect the amount raised during ICO

##### **2.2.1.1.4.2 Vesting Period**

What is the vesting period for the team and advisors. A shorter vesting period is a negative factor as there is no incentive for long term growth.

##### **2.2.1.1.4.3 Unsold Tokens**

Will unsold tokens be burnt in order to reduce total supply.

#### **2.2.1.1.4.4 Lockup**

How long tokens are locked up from the crowd sale before transferable.

#### **2.2.1.1.4.5 Discount/Bonus**

What was the discount/bonus for the ICO and/or presale. A higher bonus reflects poorly as there is selling pressure once the token lists.

#### **2.2.1.1.4.5 Sale Structure**

We have analyzed the results of numerous sale structures such as First Come, First Serve, tiered rounds, etc. There is clear correlation on the outcomes for each structure.

#### **2.2.1.1.4.6 Raising Amount**

How much is the ICO trying to raise compared to the current market standard and similar projects.

#### **2.2.1.1.4.6 Openness**

What restrictions/limitations were there for investors to participate in the sale. The more open a sale is the less likely it has for potential gain as the buying pressure is low.

### **2.2.1.2 Qualitative**

Not all measures and metrics that form part of an ICO are purely quantitative. For qualitative measures our data analysts compute the following.

#### **2.2.1.2.1 Team**

The team is paramount to the success and the realistic determination of whether the project can deliver. It is challenging to design a fair and accurate metric for the team. We have devised it into numerous subsets and use a weighted average.

#### **2.2.1.2.1.1 Job experience**

How much experience do they have in the relevant field(s) that the ICO falls under. Typically, a larger amount of experience is paramount for a more competent team. The position is also considered. Typically, the more senior the position, the more favorable the outcome.

The company of employment will also be considered. The more reputable the company the higher the rating will be.

#### **2.2.1.2.1.2 Proven History**

Is there a proven history of success in start-ups/tech companies/blockchain projects amongst the team and/or team members. Early stage tech start ups prove challenging for even the most competent teams. A history and track record of success (while not a guaranteed positive) have shown to be indicative of higher returns from our model. While we acknowledge "Measures of entrepreneurship are notoriously difficult to construct" (Frick, 2014) our data has shown a firm positive correlation with the above.

#### **2.2.1.2.1.3 Technical Team**

How many technical team members do they have and how qualified are they. Based on the complexity of the project this is an important metric as an understaffed team has adverse effects.

#### **2.2.1.2.1.4 Influence/Strategic value**

Often blockchain projects require individuals with a large amount of influence and leverage professional networks in order to move the project forwards and create key partnerships. We analyze each senior member in relation to the needs of the project.

#### **2.2.1.2.1.5 Advisors**

Advisors are ranked on the same metrics as the team.

#### **2.2.1.2.1.6 Partnerships**

Partnerships are ranked on the same metrics as the team.

#### **2.2.1.2.1.7 Competitors**

##### **2.2.1.2.1.7.1 Current**

Who are the current competitors in the market and what is the differential between the current ICO and them is. IF there are no direct competitors in the market this is a positive as they are first to the market.

##### **2.2.1.2.1.7.2 Future**

Are there strong future competitors. If this is the case the ICOs need to be ranked directly against each other.

##### **2.2.1.2.1.7.3 Outcome**

What are the typical outcomes for ICOs of this type. This historical data reflects onto potential future outcomes.

#### **2.2.1.2.1.8 Governance**

Where is the company incorporated and what implications does this have for the company. A prominent concern is the tax implications.

#### **2.2.1.2.1.9 Law and Regulation**

What laws and regulations is the company subjected to and what hindrance may this cause.

#### **2.2.1.2.1.10 Prior Investment**

Has the company received prior investment. If yes, who was the investment from and to what value. Institutional investment is a strong sign of company legitimacy; however it does not indicate success.

#### **2.2.1.2.1.11 Product State**

What state is the product in. We categorize this as follows:

- Whitepaper Only
- In Development
- MVP/POC
- Beta
- Alpha
- Working Product

Typically, the further along the development lifecycle and more proven the solution is the higher potential returns.

#### **2.2.1.2.1.12 Time Active**

How long has the project been active before the token sale. The longer the active period the higher likelihood of future progress.

#### **2.2.1.2.1.13 Vision**

What is the future vision for the project. If the project is focused towards a shorter or longer term approach and outcome then this needs to be factored into our model.

#### **2.2.1.2.1.14 Whitepaper**

We determine the quality and accuracy of the whitepaper by consulting domain experts.

#### **2.2.1.2.1.15 Code Quality/Openness**

A shared/open codebase provides more surety that the project is legitimate. Code quality is reviewed externally by domain experts. Analysis of open projects provides significant and regular data (Rating, 2018).

#### **2.2.1.2.1.16 Need for Token**

Often solutions do not need their own token and are doing so to raise excess capital. Typically, projects without a valid reason for token existence have performed poorly in comparison to competitors.

## **2.3 Historical and Current Market Data**

Since November 2016, we have kept record of as much data as possible. This includes both market data and sentiment data. We have stored sentiment data from over 1000 Telegram Groups and have recorded trading data from over 10 exchanges and over 200 cryptocurrencies.

We compare this historical data and trend data to the current market to make predictions of market outcomes.

### **2.3.1 Bull/Bear**

Is the market in a bullish or bearish trend. This has a large effect on the overall outcome for ICOs in the market. Old market trends that match this are considered and similar projects both in terms of

product and sentiment are analyzed under the same conditions and the future outcome is determined.

### **2.3.2 Trend/Technical Analysis**

We analyze the market using machine learning for trend and technical analysis. This has shown us clear outcomes and improves the accuracy of our model significantly. (Michniuk, 2017)

### **2.3.3 Volume Analysis**

Historical and current volume data on numerous exchanges are analyzed and corresponding trends and factors are considered for the outcome of the ICO. There are high levels of correlation when factoring in volume trends with other pattern recognition.

## **2.4 External Data Analysis (Influencers)**

In the cryptocurrency and ICO space there are many respected and extremely influential personalities and bodies. Many influencers in the space have independent review processes and keep opinions and analysis of upcoming ICOs transparent through means of spreadsheets and public ICO reviews.

We have analyzed the correlation between these reviews and the outcomes of projects and have repeatable correlated data. A factor such as how much influence the reviewer has is paramount and is calculated in continuity.

Many reviewers have directly overlapping metrics such a team, vision, product, advisors, etc. We incorporate these into our machine learning model on a weighted basis for each influencer.

## **3. Products**

# 3.1 Sentiment Intelligence Prediction Platform

## 3.1.1 Overview

The Sentiment Intelligence Prediction Platform (SIPP) will be available to ourTell (OTL) holders. The platform will be accessible in various tiers depending on how many OTL Tokens are held.

The SIPP will be accessible on our web platform at first. Android and iOS app will be added to the roadmap once we have further developed more core elements at ourTell.

To access the platform, OTL holders will need to hold a certain number of OTL tokens and prove the wallet belongs to them. There is no cost for this service; users simply need to hold sufficient OTL.

## 3.1.2 Tiers

The platform will be based on a simple 5 tiered system with varying access to functionality. ourTell may remove or add tiers and categories as we progress.

How many OTL will be required to access each tier:

- A. 10000
- B. 20000
- C. 100000
- D. 500000
- E. 1000000

	A	B	C	D	E
<b>Sentiment Analysis:</b>					
Users				X	X
Messages					X
<b>Social Media Analysis:</b>	X	X	X	X	X
Size	X	X	X	X	X
Age/Growth			X	X	X
Bought/Fake Users				X	X
Activity			X	X	X
Responsiveness		X	X	X	X
Trend/Pattern Analysis			X	X	X
Reach			X	X	X
<b>Token Metrics:</b>					
Allocation	X	X	X	X	X
Vesting Period	X	X	X	X	X
Unsold Tokens	X	X	X	X	X

Lockup	X	X	X	X	X
Discount/Bonus	X	X	X	X	X
Sale Structure	X	X	X	X	X
Raising Amount	X	X	X	X	X
<b>Team/Advisors/Partnerships</b>					
Job Experience			X	X	X
Proven History			X	X	X
Technical Team				X	X
Influence/Strategic Value				X	X
<b>Competitors</b>					
Current	X	X	X	X	X
Future		X	X	X	X
Past Outcome				X	X
<b>Governance</b>		X	X	X	X
<b>Law and Regulation</b>		X	X	X	X
<b>Prior Investment</b>		X	X	X	X
<b>Product State</b>		X	X	X	X
<b>Time Active</b>		X	X	X	X
<b>Vision</b>		X	X	X	X
<b>Whitepaper</b>			X	X	X
<b>Code Quality/Openness</b>			X	X	X
<b>Need for Token</b>			X	X	X
<b>Historical/Current Data:</b>					
Bull/Bear			X	X	X
Trend/Technical Analysis				X	X
Volume Analysis				X	X
<b>External Data Analysis</b>	X	X	X	X	X

### 3.1.3 ourTell Genesis Token

All contributors during the token sale who contribute more than 10 ETH will receive their OTL tokens and further 1 ourTell Genesis Token. This token is non transferable and allows the holder of the token permanent access to Tier C in the SIPP without needing to hold any OTL. The OTG token serves to thank early adopters. The OTG token will be valued at 100000 OTL tokens when using the SIPP. I.e. should an OTG holder wish to access Tier D they would need 1 OTG token and 400000 OTL.

OTG holders may be subject to other advantages and benefits in the future.

## 3.2 Sentiment Intelligence Fund

### 3.2.1 Overview

During the token sale 15% of funds raised will be used to capitalize the Sentiment Intelligence Fund (SIF). This fund will use our Sentiment Intelligence prediction platform to invest in the best

ICOs and at a later stage currently trading cryptocurrencies and even traditional equities.

ourTell Token(OTL) holders will be able to invest directly into the fund from July 2018. This will be done by locking in OTL Tokens into our Smart Contract for a chosen period. OTL Token holders will receive proportionate profits distributed at the end of an investment cycle. In the event of a loss OTL Token holders will receive their original investment back less the proportionate loss, administrative fees and analyst fees.

Investment cycles will be for a fixed amount of time that is established before tokens are locked. Tokens may not be transferred until this time period lapses.

All investments and terms of investment from the SIF will be completely transparent to OTL holders.

The SIF has been running in beta since July 2017. No investment has occurred but rather simulated investment and outcomes based on the Prediction Platform. The beta has been run as if a real fund to determine the profitability and viability of the fund.

### **3.2.2 Fees**

ourTell will take a 15% administrative fee on the final amount of an investment cycle. This applies through both a profit and loss.

Sentiment Analysts will receive compensation from the fund. A fixed compensation of 2.5% will be allocated to analysts based on proportionate contribution and accuracy. In the result of a profit the analysts will receive an additional compensation up to 1% of the final investment cycle amount. After the completion of the Token sale there will be a temporary fund set up for sentiment analysts until the fund is fully operational. Once operational the temporary fund will be absorbed by the SIF.

Where capital from the fund has been provided directly from ourTell we shall retain the full amount to either reinvest in the fund or distribute to other departments of ourTell. Profits gained with internal capital in the fund will never be used to compensate employees beyond a 10% bonus on annual salary. If a bonus is provided it may only be done so once yearly.

## **4. Token Metrics**

## 4.1 Overview

The ourTell Token is designed to create an ecosystem among the various participants in ourTell, including, investors, analysts and The Sentiment Intelligence Fund.

There will be a total of 750,000,000 OTL tokens. There will never be more tokens issued.

## 4.1 Token Sale

### 4.1.1 Overview

The ourTell token sale will allow for the widespread distribution of OTL and allow for users to join the ourTell ecosystem. While the token sale is currently unrestricted to country we are consulting our legal team on restrictions that may be in place. Particularly, we are consulting our legal team with regards to participation from USA and China.

During the crowdsale ourTell will be raising \$28,000,000. The token sale will last 30 days, any unsold tokens will be burnt and removed from circulation.

## 4.2 Token Allocation

The ourTell token will be broken up as follows:

*80% (600M) Crowdsale*

*15% (112.5M) Sentiment Intelligence Fund*

*15% (112.5M) Founders and Team*

*2.5% (18.75M) Advisors*

*2% (15M) Bounty*

*0.5% (3.75M) Early Sentiment Analysts*

- Tokens will be distributed to crowdsale participants and be available for transfer within 10 days of the token sale.

- The Founders and Team will receive their tokens over a 4 year period, with tokens vesting in 6 month cliffs. The vesting will start on completion of the token sale.
- Advisors will receive their tokens over a 2 year period, with tokens vesting in 6 month cliffs. The vesting period will start on completion of the token sale.
- Tokens will be allocated to successful completion of bounties. Bounties will have a predefined number of assigned tokens. Left over bounty tokens will be allocated to the Sentiment Intelligence Fund. Tokens will be released after completion of the token sale.
- Early sentiment Analysts will receive their tokens in full 10 months after completion of the token sale.

## 4.2 Funding Distribution

With a successful crowd sale, \$28,000,000 will be raised. The funds will be distributed as follows:

*40% (\$11.2M) Research and Development*

*15% (\$4.2M) Sentiment Intelligence Fund*

*15% (\$4.2M) Operations and Legal*

*10% (\$2.8M) Marketing*

*10% (\$2.8M) Acquisition*

*5% (\$1.4M) Temporary Analyst Fund*

*5% (\$1.4M) Exchange Listings*

- Our Prediction Platform is the core at ourTell. With the funding achieved we will primarily focus on enhancing and expanding our prediction platform to have the most complete cryptocurrency analysis possible. Expansion beyond just Initial Coin Offerings is the first item on the roadmap once the platform is consistently performing at a satisfactory level.
- The Sentiment Intelligence Fund has been running in simulation since July 2017 and we are comfortable to begin using it in

production. We will use 15% of the funds raised to capitalize the SIF.

- Operational and legal costs will be covered using raised funds. These are ongoing expenses such as rent and salaries.
- Active and ongoing marketing to raise awareness of ourTell and the ourTell token will be done. The token will be most effective if there is widespread adoption.
- 10% has been set aside for acquisition of proprietary technology that will benefit the ourTell platform and ecosystem both on a Research and Development level and financially.
- A temporary analyst fund will be set up in order to remunerate sentiment analysts until the SIF is operational.
- As stated previously, the token is of most value when it is widely adopted and this requires high levels of liquidity. As such, exchange listings will be a priority for ourTell.

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