

Amor

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Abstract

Amor is a decentralized dating platform that brings credibility to online dating. For years, the online quest for love has been plagued with bots, inaccurate profiles, no-shows, ghosting and online bullying. In this context, credibility is having an accurate profile, showing up to your date on time and being engaged with your date. Our thesis is that credibility can be increased in online dating by decentralizing decisions on credibility and increasing transparency with a blockchain-based ledger. This social credibility economy is fueled by the AMOR token built on top of the Ethereum token. Users employ a pool of AMOR tokens to reward credible users on the platform. Having a pool of AMOR removes the burden of microtransactions while allowing a granular feedback loop in the form of date follow-up questions, likes and unlikes. Awarded tokens can be burned to promote oneself through digital power-ups or held as a sign of credibility. This incentive structure is powered by Ethereum smart contracts. Smart contracts also manage the pool of tokens to ensure scarcity.

Table of Contents

Abstract	0
Table of Contents	1
Introduction	2
What is Credibility?	2
Online Dating Market	2
Design Approach	3
User Flow	3
Feedback Loop	4
Incentives	5
No Microtransactions	5
AMOR Token	5
Crowdsale	6
Social Economy	8
Contracts	10
Experiments	10
Decentralization	10
Business Model	11
Extensibility	11
Promotional Material	11
Entry Fees	11
Crowdsale	11
Censorship	12
Privacy	12
Security	13
Challenges	13
Economy	13
Content Curation	13
Extensibility	14
Roadmap	14
Conclusion	14

Introduction

Online dating lacks accountability. In today's world, users who seek genuine connections via mobile apps have little choice but to rely on a limited central authority when dealing with the "bad apples"—bots, no-show's, etc. What's worse, behaviors like mindless swiping and ghosting occur all too often, and rob hopeful singles of their chance for a safe and successful experience when it comes to finding love.

According to a recent study, the average single person will go on at least seven dates before settling down¹. If dating is truly a numbers game, why would anyone want to waste time on swipe-rights that lead down the wrong path?

It is Amor's mission to accurately and transparently reward credibility through a decentralized dating platform that empowers individual users to evaluate eligible bachelors and bachelorettes by employing a pool of AMOR tokens. This accounting system needs to be fair to all token holders for users to reap the greatest benefits.

What is Credibility?

In the context of online dating, a user is credible when they are a real person who maintains an accurate profile and engages appropriately on dates. Regrettably, many existing platforms are plagued with bots, bullies, and ghosters and cause undue distress for users who are simply looking for love. This can be avoided with a system of credibility, where first-hand daters provide objective evaluations of the interactions they have.

On the flip side, credibility can also favor those who are there for the right reasons. Users who are credible deserve to capture more value rather than be thrown back into a pool of randomly shuffled profiles. While most processes remain blind and reliant on pure luck in centralized systems, Amor entrusts the decentralized network of online daters to match credible singles with other credible singles.

Online Dating Market

In an attempt at credibility, there are online dating platforms that allow you to connect with friends of friends. This achieves some credibility, but you're bound to the limitations of the corresponding social network company as a central authority and this may not help you much in a new area or if you're not on social media. You're limited to a central authority's method of matching you, whether it's 16 magical questions or if it was a 3rd degree of

¹ "Average woman will kiss 15 men and be heartbroken twice before meeting 'The One', study reveals," The Telegraph, <http://www.telegraph.co.uk/news/picturegalleries/howaboutthat/10545810/Average-woman-will-kiss-15-men-and-be-heartbroken-twice-before-meeting-The-One-study-reveals.html> (January 1, 2014)

separation from a high school classmate you barely knew. We believe that a decentralized network of people looking for credible people has a better chance.

Other dating platforms have an in-app currency of some sort, but this is nearly always gamification aimed at driving usage or incentivizing a premium subscription. I'm looking at you Coffee Meets Bagel.

Design Approach

The design of Amor's dating platform is guided by the following principle: users should be rewarded for credible behavior and those rewards should be translatable to more visibility to other credible users on the site.

The traditional online dating user flow mostly makes sense.

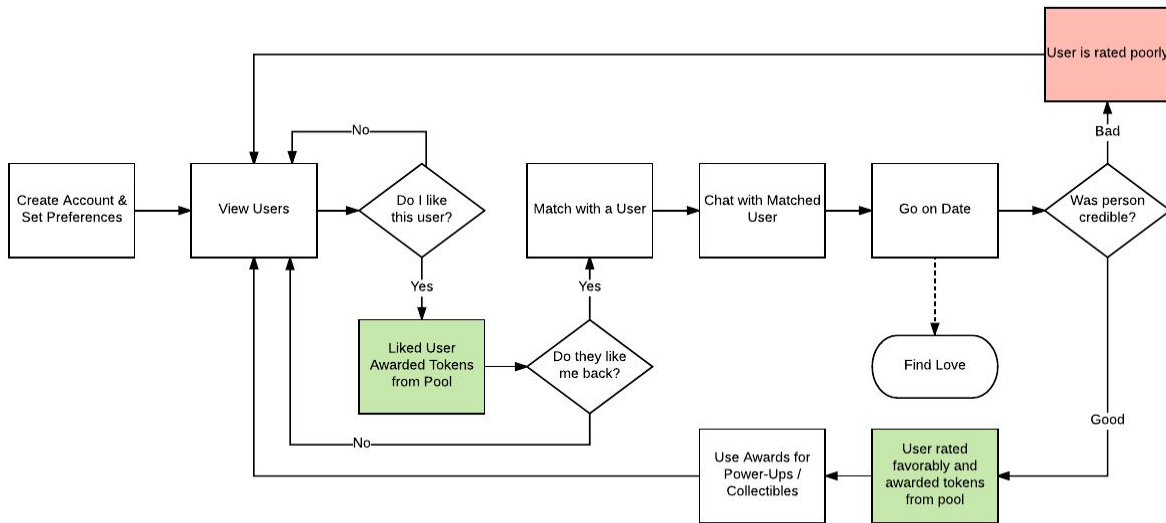
1. Users specify limited demographic preferences.
2. This results in pools of users with alike preferences.
3. Each user then expresses interest in users based on attraction to a set of photos or provided biographical information.
4. If two users like each other, they are matched and can coordinate a date if they so choose.

The issue, of course, is that there is no accountability or feedback loop. The user you matched with could be a bot or it could be someone who matched with you to send you discriminatory remarks. They have every reason to inaccurately market themselves in their profile without consequences. They are simply thrown back into their preference pool.

In the following sections, we will describe the feedback loop and incentive structure that is built into our decentralized platform. This feedback loop is crucial for promoting users who exhibit favorable behavior.

User Flow

Before describing why our feedback loop and incentive structure works, it's important to detail our user flow and how it differentiates from traditional online dating user flows. This visualization captures the user experience on the Amor platform.



This user flow closely follows the traditional online dating flow that users have come to expect. However, its integration of a feedback loop and incentive structure are crucial in setting it apart.

Specifics on the the AMOR token pool management and maintaining scarcity of the token are detailed in later sections.

Feedback Loop

If a user is able to attract another user enough to receive a like, they are awarded a trivial fraction of tokens from the AMOR token pool. Why award likes at all? Curating content about yourself is important to getting noticed, so we feel like profiles that get likes deserve some small reward.

If a user likes back, they are matched and can coordinate a date via chat. The more important part of the feedback loop comes next. The user is asked a set of date follow-up questions, including:

1. Was this person on time?
2. Was their profile accurate?
3. Was this person engaged during the date?

Each of these questions are intentionally objective. The user can answer each of these questions without incorporating any subjectivity. A user may have had a great date, but the person wasn't quite for them. They can still mark the person as a credible and move forward in the user flow.

Answers to these questions could result in AMOR token much larger than from a like.

How does Amor know when to ask date follow-up questions? Machine learning detects a coordinated date. If no date is detected, Amor will ask if a date happened and, if so, how it went.

Incentives

There is an incentive structure inherent to cryptocurrency due to its value within and outside of the platform. This could greatly facilitate the growth of our platform. Our discussion will focus on its value within the platform. The feedback loop mentioned previously is important because it determines whether or not users are awarded tokens in exchange for credible behavior as determined by their date. Users are held accountable and can either adapt or never be able to take full advantage of the platform.

Dating is a numbers game. A user that exhibits favorable behavior will collect AMOR tokens and use them to have a better experience on the platform through an increase chance of matching with credible people or through some other modifier available with AMOR tokens.

What can AMOR tokens be used for once received? AMOR tokens can be spent and sent back to the pool for two categories of benefits: power-ups and collectibles.

Power-ups are timed or untimed modifiers on a user's account that increases their chance of finding love. For example, one such modifier is an increase in the number likes that user can submit in a day. Another power-up secures a spot in the first 10 users other users will see that day.

Collectibles are permanently acquired digital goods. These may be literal collectibles to show off interests, such as a movie poster, or they may be a usable collectible such as a two-player game for a richer chat experience. A user can make a much better impression with a fun game than some pick-up line.

No Microtransactions

Microtransactions are extremely unpopular and for good reason: they don't work. Adding a microtransaction to a frequent low-level user function adds a level of anxiety that can build into decision fatigue, driving usage away from the platform. This is why credibility awards in the form of AMOR tokens are pulled from a pool. In other words: someone else's money.

AMOR Token

In addition to arguing for blockchain technology as the foundation of Amor's platform, it is important to defend the usage of the AMOR token as well.

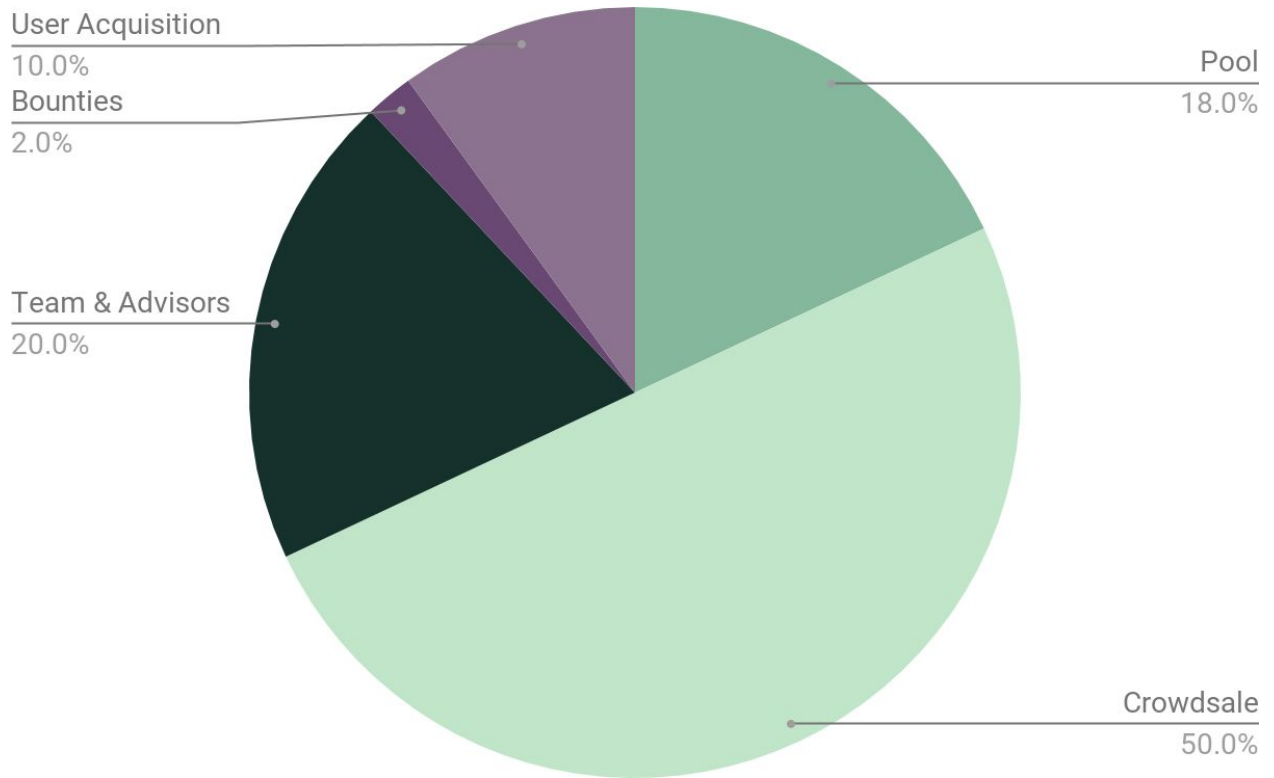
Why is it important to have a token?

1. AMOR tokens operate as a straightforward measure of value and credibility on the platform. There's a logical incentive structure and network effect with a cryptocurrency, both of which are important for the platform described in this whitepaper.
2. We are having a crowdsale of AMOR tokens. This will be vital for covering initial business costs.
3. User acquisition is one of the more important upfront efforts. AMOR tokens will be given to initial users to cover the minimum balance required in having an account, enabling them to like other users and have matches.

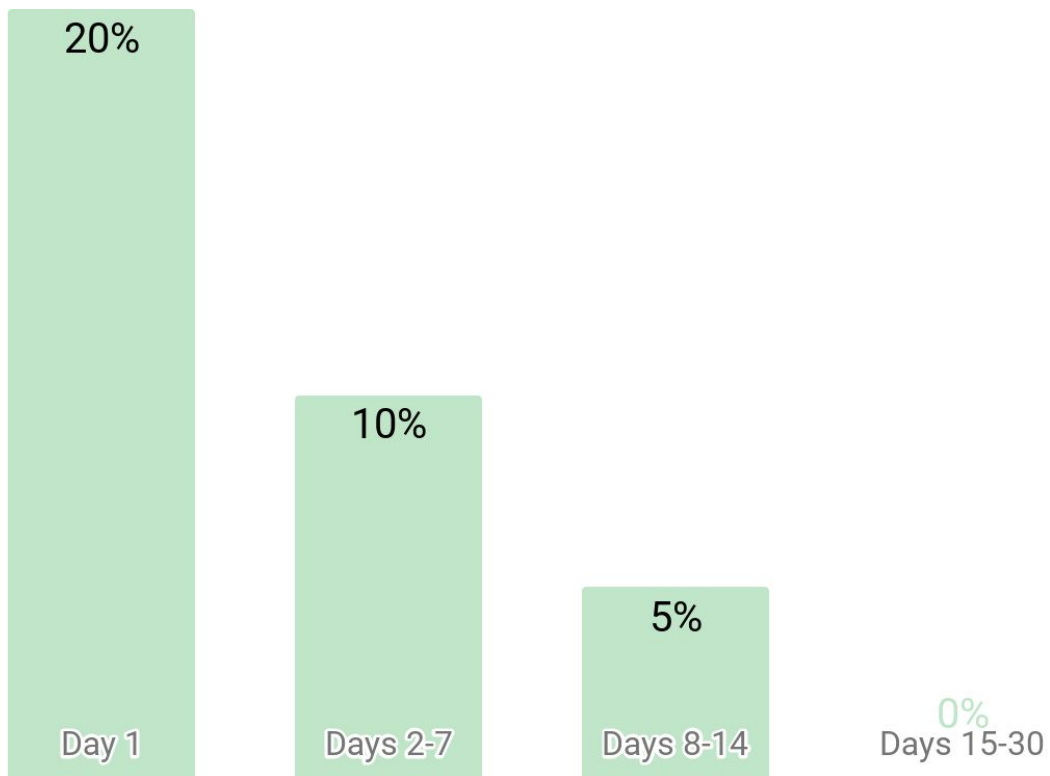
Crowdsale

The crowdsale is vital for covering initial business costs. The month-long crowdsale starts December 2nd.

Crucial to the success of Amor is the establishment and growth of its user base. This is why there are AMOR tokens are set aside to be given to users upon account creation as a free minimum balance necessary to start liking other users. AMOR tokens will also be held to form the initial pool from which credibility awards are drawn from. The distribution of these tokens are included below for convenience. 50% of tokens will be sold in the crowdsale, 20% of tokens given to team members and advisors, 10% used for user acquisition, 18% held for the pool and 2% for bounties.

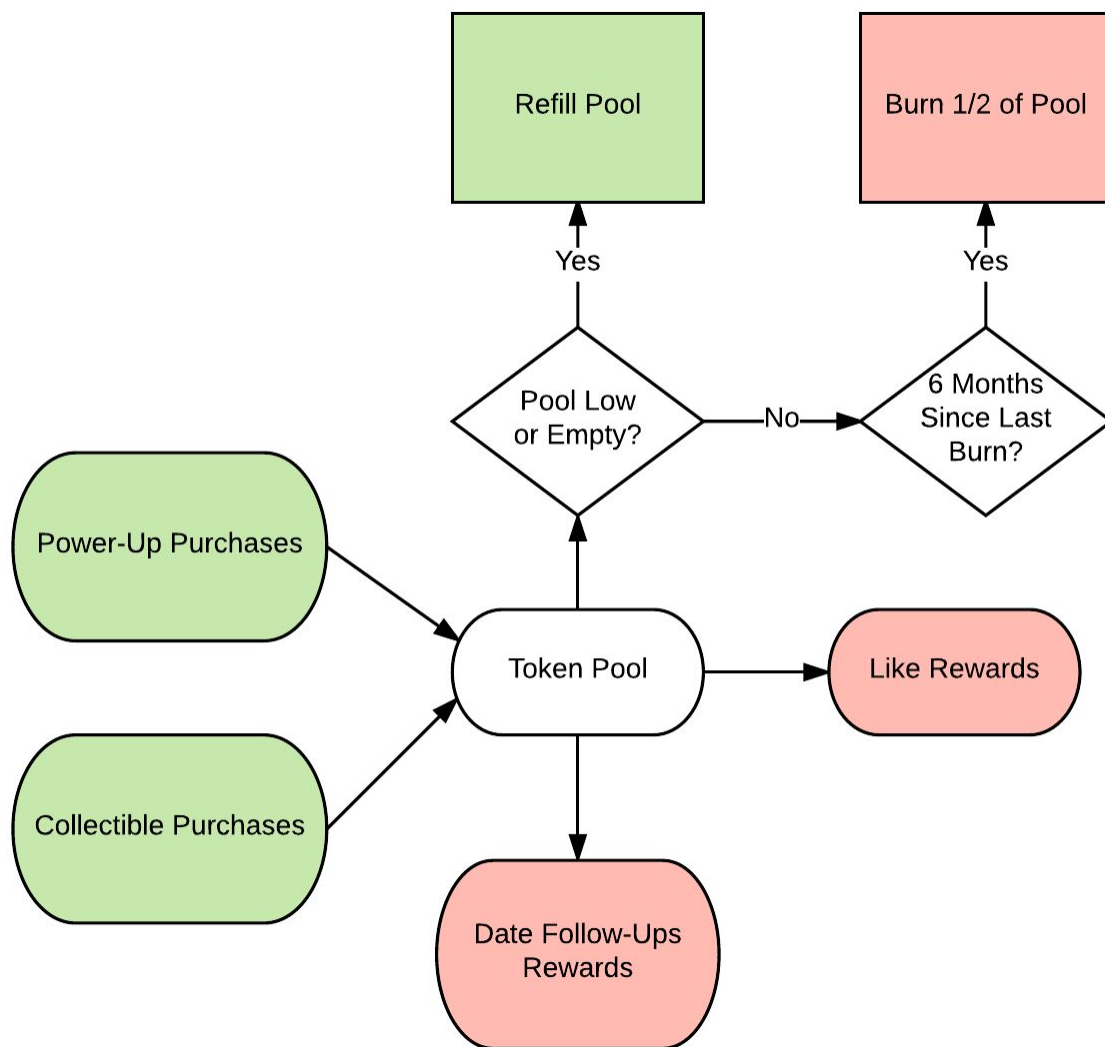


In order to incentivize early activity in our crowdsale, we've added a bonus structure. This structure visualized below for convenience. Sales of the token in the first day will include 20% bonus tokens. Following the first day, bonuses will be 10%, 5% and 0% for days 2 through 7, 8 through 14 and 15 through 30, respectively.



Social Economy

A social economy is formed by this platform. The parts of the economy include token holders outside of the platform, token holders within the platform and the pool of tokens available for rewarding credible behavior. This economy looks like the diagram below.



Without experimental data, it is difficult to parameterize the refill and burn rate. This is partly why we chose to release a beta as part of our roadmap. We'll need to telemetry to determine how often tokens are spent on power-ups and collectibles so that we can determine how often the pool needs to be refilled, if at all. From there, we can calculate inflation and tweak parameters accordingly to ensure token scarcity.

Currently, the design to is to have daily payouts of 0.25% of the pool size. These will be allotted to users based on the likes and positive date follow-up questions from that day.

Another part of the economy that is still under discussion is the idea of a minimum user account balance. This minimum account balance of tokens would enable the user to like other profiles. Behind the scenes, this balance would help with transaction fees and remove any possible need for microtransactions.

Contracts

Ethereum smart contracts are crucial to the conversation given the complexity of the economy outlined above. Amor's core game logic is decentralized using the Ethereum Virtual Machine. One of Ethereum's biggest selling points is its smart contracts, which are small pieces of code that run on Ethereum's programmable blockchain. This blockchain will behave as a completely transparent ledger of activities and rules for Amor.

Experiments

Since this social economy is completely new, the team plans to perform experiments frequently and iterate accordingly. This will need to be done without damaging the integrity of the platform.

For example, how do we handle overrepresented demographics within a preference pool? One consideration is to scale prices on power-ups. For example, in a heterosexual preference pool, there may be an abundance of men. What if it was more costly for them to purchase power-ups?

Decentralization

We believe that the current online dating model is broken and that you can't rely on a central authority. A central authority has no way of reviewing the credibility of every user. On the other hand, each user's credibility can be reviewed through a decentralized network. The determination of relative credibility for any given user is completely decentralized. This network certainly has its best interest in mind and is capable of determining credibility. An additional benefit of decentralization include a transparent ledger of activity.

However, the reality of an app is that there is a centralized component. In order to stay competitive, our software must undergo continuous development from engineers who have permissioned access to the software. We hope to keep this component limited to the application front-end and a thin data layer for limited demographic pooling.

Here is the breakdown:

Decentralized	Centralized
Cryptocurrency Token	App Front-End
Credibility Awards	Thin profile data layer

Power-Up / Promotion

Token Pool

Business Model

Fortunately, there are several income streams that are available to us.

Extensibility

Amor is very excited about opening its API up to developers. It has been built from the ground up with this in mind.

Keeping the "No Microtransaction" model in mind, the interface between users and developers will most likely be methods to unlock richer experiences with AMOR tokens. This also presents another income stream.

There are several areas where developers can really improve the online dating experience. The area we are most excited about is in the context of chatting with your match. This is usually a very vanilla experience, most commonly known for their cheesy or offensive pick-up lines. We envision a richer chat experience with 2-player games created by developers. A user can pay a token to acquire a game and use it with people they match with. This can improve their chance of taking the date to the next level. Their match will already associate them with fun.

A second large area is in the form of digital collectibles. Collectibles themselves serve as a form of credibility and be used catch the eyes of prospects or might highlight a common interest.

Promotional Material

A third large area could be in the form of free promotion material. For example, a couple could get a coupon for drinks nearby that could lead to an actual date.

Lastly, you could pay tokens to have a consultant help you with your profile.

Entry Fees

As stated previously, users may eventually have to have a minimum balance in order to like and match with other users.

Crowdsale

We expect the crowdsale to cover the initial costs of creating this platform.

Censorship

Censorship resistance is a fundamental characteristic of a decentralized system and one of the more favorable benefits of blockchain technology. The ledger of activity that is inherent in the blockchain provides participants complete transparency. A central authority doesn't have the power to change the rules or censor a user's activity. Amor is committed to upholding this ideal of free speech and non-censorship.

In regards to the specific platform described in this whitepaper, it is up to the users of this platform to determine credible user behavior. Users must be comfortable with their values in deciding who to like and rate favorable in date follow-up questions. For example, we can't limit the creation of pornographic materials, but the decentralized network can deem these materials and uncredible and not award them tokens, effectively silencing the users responsible for them. We're hoping the same kind of decentralized silencing occurs with behaviors such as discrimination and online bullying. We believe that the decentralized network will only promote credible users.

In sync with the inherent transparency of a decentralized network, Amor's front end makes a user's AMOR tokens visible at all times, providing an excellent insight into that user's credibility. A user can choose to never like a user that is below a certain level of credibility. Additionally, users with low credibility have fewer likes and, consequently, lower chances of matches.

One exception to the nearly non-existent censorship involves breaking the law. If an individual is involved in something such as child pornography, we will deal with the individual as necessary, banning their account in the process. Such actions are in violation of our usage policy.

Privacy

Privacy and how businesses handle user data has become one of the most discussed topics as highlighted by the European Union's new data protection law, the General Data Protection Regulation.

Amor is looking into decentralizing as much user data as possible. We are planning on holding as little user data as possible, used solely for light filtering on demographic information. In a day and age where hacking is always a possibility, this is important for keeping our users safe. Additionally, any stored demographic data is private by default and only shared with other users with authorization.

Security

The primary security concern involves automated collection of AMOR tokens through our reward system. We have thought about this extensively.

First, we will describe the problem more fully. A large group of coordinated automated users join our decentralized network. Conceivably, they could take advantage of niche profiling, pooling into an underrepresented demographic where they would flood the market. Then, they would like and match with one another. Each match would have a chat associated with it, in which the automated persons could attempt to trick the date-follow up algorithm to trigger, responding to follow-up date questions favorably. This could cause a large portion of credibility rewards to go to the puppetmaster.

There are several stages of defenses against this.

As stated previously, users will eventually need a minimum balance in order to send likes to other users. This upfront cost might deter some automation.

One way in which we can minimize such abuse is through limiting daily likes.

Lastly, owning a AMOR token buys the right to validate the blockchain. You can imagine that users getting the most credibility are also getting the most scrutiny in the transparent blockchain ledger. As automation violates our rules for use, these users would be banned

We are also looking into pooling credibility awards based on profile, taking away the advantage of automating flooding of an underrepresented demographic. In any case, the maximum loss of tokens to bots is defined by the daily payout, so we'd certainly have time to react.

Challenges

Economy

Amor has an obligation to token holders both on and outside of its decentralized dating platform. Managing the AMOR token pool needs to be carefully calculated to keep the AMOR token scarce, while still able to adequately reward credibility. We believed that our design has achieved this.

Content Curation

As discussed previously, decentralized systems have a lot of censorship-resistance. We expect the community to silence unfavorable behaviors such as pornography and

discrimination with our credibility reward system. However, Amor plans to have more involvement when laws are broken.

Extensibility

Extensibility will be an important part of Amor's business model moving forward. They will also allow for much richer user experiences with content such as two player games. APIs will need to be secure enough for users to comfortably pay for additional content with AMOR tokens. It's also important for the APIs to be easy to use in order to quickly grow our developer community. We have been building our platform from the ground up with this in mind.

Roadmap

The Roadmap for the launch of Amor.

Date	Target
May 2017	Conceptualize platform in detail
June 2017	Begin MVP development
September 2017	Coordinate crowdsale
December 2, 2017	Launch crowdsale
February 2018	Release beta near Valentine's Day
July 2018	Release platform worldwide
October 2018	Open up API to developers

Conclusion

Amor is a decentralized dating platform that uses its distributed network to help users find credible people and ultimately love. AMOR tokens are built on top of Ethereum and represent a user's credibility. These tokens are awarded from a pool through favorable activity on the platform by other users. Awarding tokens from a pool removes the burden of microtransactions while allowing more frequent awards from date follow-up questions and likes. These tokens can be held as a sign of credibility or burned to promote oneself. These awards create a feedback loop and a sense of accountability that doesn't exist in online dating today.