



# Commodity Ad Network

A Network of the Good Guys, for the Good Guys.

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# Introduction

The Commodity Ad Network is a network of creative minds – bloggers, website owners, content creators. Minds that go against the powers that be, who speak out against the corruption in governments all over the world, who are aware of the disastrous policies of central bankers, who write openly about corporate interests going hand in hand with government regulations.

The Commodity Ad Network is to serve these people who, if given the chance, are capable to change the thought processes of millions of other minds all over the world.

Interestingly, creative minds like these are extremely underpaid. It almost seems as if the very system they keep exposing as fraudulent, corrupt, and outright evil, doesn't want them to be able to make a good living out of their hard work.

The Commodity Ad Network is an idea that needs to be tested in the real world. We say that there can be an ad network that charges advertisers less and pays content creators much more. So much more that they will be excited to create more content and, thus, earn even more revenue.

We say that there can be an ad network that utilizes the network effect by enabling content creators to promote their own websites within the network. We say that the Commodity Ad Network has the potential to become so large and so important, that it will open the eyes of millions upon millions of individuals all over the world.

# 1. The Business

The business model of the Commodity Ad Network is based on a simple objective — to pair up the correct content creators and the correct advertisers from the alternative media niche market. A correct mix of these parties means a profitable mix. To incentivize both sides, we aim to charge advertisers less and pay content creators more than the large ad networks which are the current standard among both advertisers and content creators.

To achieve this goal we rely on the self-interest of both content creators and advertisers — both of whom are being screwed financially in the currently largest ad networks.

We aim to start small and reach a mix of approximately 300 content creators and about 60 advertisers. According to our calculations, 300 content creators would provide enough ad space, so that our ad network becomes interesting to advertisers right from the start.

We would like to sign up all of these network participants to the ad network by the end of 2017. If not, we are planning to grow steadily throughout 2018, until we are recognized by our niche market as the most ethical, most reliable, and best paying ad network with fantastic customer support.

## Motivation

The largest ad network employs an auctioning or bidding mechanism to determine the prices of keywords. These keywords are the basis upon which ads are displayed. Keywords are what advertisers use to let the ad network determine on what content creator websites should their ads be displayed.

We have experienced first hand how the effectiveness (conversions, ROI) of our expended budgets plummeted once businesses with very large budget joined in to the bidding wars. In a world where bidding up the prices of keywords decides whose ads will be displayed, having a very large budget gives a business the upper hand 100% of the time. Small to medium businesses got priced out of online ad markets shortly after the financial crash of 2008.

Many turned to social media as an alternative. However, we feel that social media is simply online word of mouth marketing. Certainly an important part of every business' marketing efforts, but not a panacea. It is also very costly in terms of time needed to create a meaningful impact.

On the other side, the amount of ad revenue that one could earn in 2013 in comparison to times before the financial crash of 2008 was as much as 80% lower. The largest ad networks perfected their algorithms to charge advertisers as much as possible, while paying out to content creators as little as possible.

Given our experience, we wish to enable content creators to make a living off their hard work, but we also wish to charge advertisers less as well. We see these two sides as complementary small and medium businesses that need each other. These guys should be friends, not foes.

Implementing our own crypto currency enables us to reach our ethical business goals of bringing value to all parties involved in a fully transparent way.

## Benefits

We are trying to build a network that benefits everyone involved.

We aim to create an advertisement solution that is the best choice for business operators on both sides — both content creators and advertisers. Our focus will be on a level of personal attention and care that cannot be compared with the anonymity of the large ad serving companies.

We will also offer real-world help and support services (copy writing and graphic design of ads, embedding scripts to websites, maintaining and fixing websites) to advertisers and content creators as well. All this via [WPHelp365.com](http://WPHelp365.com), an online service aimed at helping WordPress website owners manage their websites.

## How Do Content Creators Benefit

Blogging is hard work and content creators deserve to be paid well for that hard work. We offer extremely competitive compensation to all our valued content creators.

The first 300 content creators who sign up with our ad network for a 12 month period will receive a bonus worth up to \$1,000 USD.

Each content creator who signs up with us will also receive a minimum monthly revenue. This revenue is calculated on the basis of current traffic on the content creator's website. According to our approximations, the minimum monthly revenue should be at least twice as much as a content creator currently receives from the largest ad network. This revenue can only be higher after additional revenue comes in from newly signed up advertisers.

Our goal is to share our ad revenue with content creators fairly. As our ad revenues grow and our expenses add up to a smaller percentage of our revenues, we will gradually pay out a larger percentage to content creators. We can easily see the payout levels rising up to 75% of our ad revenue eventually.

Content creators will be able to promote their own websites over the whole network at preferential rates, thus utilizing the network effect and bringing more traffic to their websites.

Content creators who fill out their [application forms](#) early, increase their chance of being signed up to the network first. Latecomers might be put on a waiting list, depending on the actual mix of advertisers and content creators at the time of their application.

We do not limit the number of instances our ads may be displayed on a single page. But we do recommend not placing more than 4-5 ads on one page. Too many ads per page are the number one reason why visitors turn to ad blocking tools.

If a content creator displays ads exclusively from our ad network, it is much easier for them to convince their visitors to whitelist our ads. Remember, we do not collect and sell metadata.

Content creators may also opt to display ads from other ad networks together with our ads.

## How Do Advertisers Benefit

The Commodity Ad Network offers an extremely focused and targeted consumer base for niche advertisers. Our networked websites' visitors are highly receptive to great deals, offers, and possibilities in a variety of niche markets. This means that on one hand, the expended budget is more likely to create higher conversion rates in comparison to a serve all large ad network. And, on the other hand, there is zero waste of the expended ad budget, as a gold coin dealer's ad will never show up on a fitness center's site in our ad network.

We believe that by displaying the same ads on a number of similar niche websites, an advertiser can actually build brand awareness and trust among a large number of dedicated website visitors. So that when these website visitors find themselves looking for a service or a product, they will likely go for a brand they are already familiar with from their favorite websites.

In an auctioning system or a bidding mechanism system, advertisers pay for ad clicks. Which on the surface seems like an advantage because they get the views for free. In our system, they get all the clicks for free, whereas they pay a flat fee for the ad views. However, it's not

about the clicks or the views so much, but about the target audience. If an ad network is not able to cater to the exact audience that will be interested 99.9% of the cases in the displayed ads, then most of the ad budget goes down the drain. That's our edge. We will be pairing up the correct advertisers with the correct content creators and their website visitors and followers. We believe that in order to do this pairing up correctly, human supervision and input is needed.

The larger ad view packages an advertiser buys, the lower the price per thousands of ad views. However, this also will require human supervision, otherwise the ad revenue of our content creators might suffer, should several advertisers with large budgets claim all available ad views for their own products or services. We need to monitor and approve all campaigns, so that a balanced and well-diversified mix of ads are displayed on the content creator websites. Otherwise, content creators might lose revenue or, even worse, they might start losing their traffic.

Further advantages:

- stable and dedicated user base
- advertisers with large budgets don't have the upper hand
- advertisers only pay a flat fee for their ad views package – they get all their ad clicks for free
- minimum or no ad blocking
- vertical approach instead of horizontal approach, i.e. preferring niche markets, not a serve all with the same ads logic
- we are a small company, so we actually have time (and take time) to know our customers and cater to their real campaigning needs
- we believe that there will be a commodity rally before the decade is over and we want to be the leaders in the commodity ad segment supporting that rally
- we offer more meaningful pricing than the industry standard bidding mechanism
- we keep up an advantageous rate of advertisers to content creators to further democratize pricing

## How Do Website Visitors Benefit

The Commodity Ad Network offers 100% privacy without compromises. The IP addresses of website visitors, their online behavior, and other similar information are safe with us. We don't collect and/or sell any metadata ever.

We only cooperate with vetted advertisers, thus making sure that only highly relevant ads are displayed on our content creators' websites.



We don't allow pop-up ads, automatic sound-on ads, and similarly annoying ads in the Commodity Ad Network. We will also try to help our advertisers create ads that are pleasing to look at while retaining conversion value.

We will try our best to persuade our advertisers to create and display ads exclusive to our network.

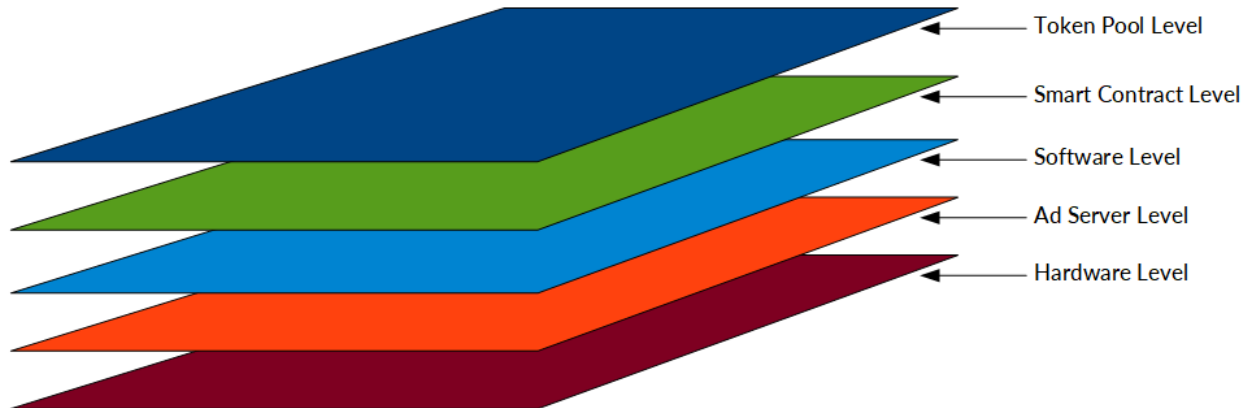
Some people claim that advertisers want their potential customers to be tracked around the internet to know what they are doing. This is absolutely not true. While there might be some very specific weirdos who would want to do something like that, most businesses care about selling products and services. The only institutions that truly need total tracking of everyone are government agencies and companies connected to these agencies. A company selling you gold coins has no interest in knowing about your specific porn tastes. The fact that large companies sold out their customers to government agencies is the best proof that they are unable to be profitable using standard business channels. The behavior of these companies is certainly not something that should be approved or esteemed. Quite the contrary, it should be publicly frowned upon and considered unethical and borderline illegal.

## How Does the Global Community Benefit

The larger online (and offline) community will benefit from the fact that content creators in the network will be finally free to spread their message uncensored and create meaningful impact in the world.

## Business Model

Our business model revolves around the usage of an Ad Server mechanism. The company operating the Commodity Ad Network feeds data to the Ad Server, as well as maintains and develops it. The following image focuses in on the Ad Server and its vertical structure.



The whole system runs on the Hardware Level – a robust distributed hosting solution ready to handle millions of ad views per day. The hardware of the hosting is dedicated to serving millions of concurrent connections from all of the network’s content creator websites.

On top of the Hardware Level, there is the Ad Server Level. All participating content creator websites contain scripts which identify the individual websites and the specific ad spaces on each website. The scripts are created by the network and sent out to content creators to be embedded into their website’s code.

Higher up, there is the Software Level. This is our custom software solution developed specifically to handle the complex calculations regarding the numbers of ad views for each ad space on each website.

After handling the calculations, the software hands over the results to the Smart Contract Level. The smart contract then sends the results to the Ethereum blockchain to deal with the payouts from the Token Pool as they were attributed to each content creator.

At the top, there is the Token Pool. This pool is constantly being drained by payouts and, at the same time, it is also being replenished via pay-ins from advertisers and content creators promoting their own websites.

## Choke Points

There are several critical choke points that need to be addressed and mitigated as they might negatively impact the effectiveness and overall profitability of the ad network as a whole.

## Philosophical Reservations

Since the pay-per-click business model is very entrenched nowadays, it's easy to assume that the pay-per-view model is somehow worse or less effective. This is a false assumption.

Selling ad views instead of clicks gets rid of the bidding mechanism which inherently favors large businesses with large ad budgets. Selling ad view packages also enables our ad network to allocate ad space to advertisers more democratically. The pay-per-view model is optimal for creating a profitable mix of small to medium advertisers and small to medium content creators.

With the pay-per-view model advertisers get all the clicks for free. They only pay a flat fee for the views, nothing more. This allows them to budget their ad expenses much more realistically throughout the year, as seasonality or trends won't affect the price they pay for ad views. Again, because there is no bidding mechanism, Black Friday ad views or Christmas ad views will cost them the same as ad views in the middle of March. This is a massive improvement in terms of ad budgeting especially for small and medium enterprises.

## Ad Blocking

Using ad blocking software is on the rise and for good reasons: ad networks display completely off-topic ads, some ads contain audio which is automatically turned on and is extremely annoying, lots of ads per page loaded create a lot of extra data traffic which is very costly to some users on small data plans.

Ads displayed in our ad network are always on-topic, never contain audio, and don't create an extreme amount of extra data traffic. For these reasons, our content creators will have a very high success rate in convincing website visitors to whitelist their websites in their ad blockers. This whitelisting effort will pay off in higher revenue as visitors who otherwise block ads from the large ad networks, will now view ads from our ad network.

## Pageview Faking

We strongly recommend to all content creators not to engage in pageview (and a resulting ad view) faking.

The agreement between our ad network and content creators stipulates that even a suspicion of unethical behaviour is grounds for the immediate termination of the agreement. Unethical behaviour is any behaviour that results in more pageviews for a content creator without related organic growth of his business, e.g. using specialist services to send more traffic to the content creator's website, asking or hinting to website visitors to click on more internal links to generate more pageviews, etc.

Should a content creator engage in anything else than business as usual, the ad network will investigate it as unethical behaviour and might unilaterally terminate the content creator's agreement resulting in a loss of revenue for that content creator.

## Site Load Speed

Some ad networks utilize ads which create considerable additional data traffic on the content creator's website. This has an effect on the website's load speed.

It's important to note that a slow loading site has serious detrimental effects on visitor retention, new visitor gains, and online sales. 4 out of 5 website visitors will not return again to a slow loading website. And almost half of them will tell a friend about their poor experience.

We encourage all our content creators to consult the speed of their websites with us. We might be able to resolve site speed issues via our [WPHelp365.com](https://wp-help.com) service.

## Disallowing Specific Ads or Advertisers

A specific content creator might have an issue with a specific ad being displayed on their website or a specific advertiser campaigning on their website.

Since we are offering ad view packages to our advertisers, we need to be able to realistically budget and allocate all available ad space on our ad network. Therefore, we don't offer an option to turn off specific ads or to disallow specific advertisers from advertising on a content creator's website.

However, should a content creator have concerns about the ethics of an advertiser or their products or services, we encourage them to notify us. We have a [feedback form](#) which can be used for this purpose.

## Monthly Payouts Creating Volatility

Monthly payouts to content creators are distributed evenly throughout each day of the month. This is to sidestep the possibility of large amounts of tokens being dumped on the market on specific days. In this fashion we are able to forego creating an increase in token price volatility on specific days.

## Technological Complexity

Adding our network's scripts might prove to be challenging to some content creators. We will be happy to help any content creator setting up our scripts on their websites.

But, generally speaking, our system is being developed to be simple and straightforward. It builds on existing knowledge and doesn't create a steep learning curve for either content creators or advertisers.

## Growth and Scaling Up

We plan to start up with niche markets related to precious metals and alternative media because these are the markets that we know best and care about most. But if our business model proves to be a success, we will expand to sibling niche markets, and, ultimately, to all markets.

Since every market is, basically, a niche market, we can apply our thinking and business model to any market as long as there are enough content creators and advertisers related to a given industry.

We aim to start out with 300 content creators and about 60 advertisers. We hope to be able to reach these levels by the end of 2017. In 2018, our plan is to keep adding 50 more content creators and 10 more advertisers a month to the ad network. To achieve these goals we will assemble a strong sales team and start reaching out to potential network participants in early October 2017.

Our hardware and software solutions will be set up in such a way, so that they have the capability to handle a massive scaling up of the numbers of our network participants.

## Ad Server Customization

We will be using customized ad server software based on the open-source Revive AdServer. Our customizations will enable us to calculate ad views on a per website and per ad position basis, then feed the results to a smart contract.

## Web Portal

New campaigns and ads will be managed on behalf of our advertisers by our support team.

New advertisers can apply to become part of our ad network by filling out an [application form](#).

We will go the extra mile and help our advertisers with creating the graphic design of their ads in all the correct and required ad box sizes.

We will also build and improve upon a web portal with login facilities for both advertisers and content creators. The web portal's dashboard will enable them to see their analytics and other important features.

We will build a basic version of the web portal by the end of 2017, but we will not rush to make it awesome just yet. We will prefer communicating with both our content creators and our advertisers, gathering feedback from them about their actual needs. In other words, we will let the participants of our ad network decide what kind of web portal would serve their needs best.

We are also aware of the fact that the technology in the field of digital cryptography progresses way too fast for us to be able to predict in any meaningful capacity what to build in advance. In some cases, including this one, slow and steady wins the race.

This down-to-earth business approach makes much more sense than trying to guess what web portal will be needed when we don't have sufficient information to make such guesses. This realistic approach is an integral part of our whole business model.

## WordPress Plugins

Most content creators in the niche markets our ad network is based upon are running their websites on WordPress. It will make a lot of sense for our software development team to create certain custom WordPress plugins.

Here is a non-exhaustive list of custom WordPress plugins we will seek to develop:

- add-ons for major ecommerce plugins to get paid in tokens via the checkout process
- donate tokens feature
- pay membership fees in tokens feature
- a plugin to simplify adding our scripts to a Wordpress site
- other plugins the network's participants might require

All plugins will use a license key, but will be freely available to all active network participants.

## Profitability

Below, we have prepared an example calculation of how our ad network would be profitable.

We are assuming an average amount of daily pageviews based on approximate Alexa rankings. These assumptions are based on our experience with developing and maintaining websites.

We then assume to have a specific mix of 100 participating content creator websites and 20 advertisers.

Finally, we calculate the approximate monthly revenue for each participating content creator's website.

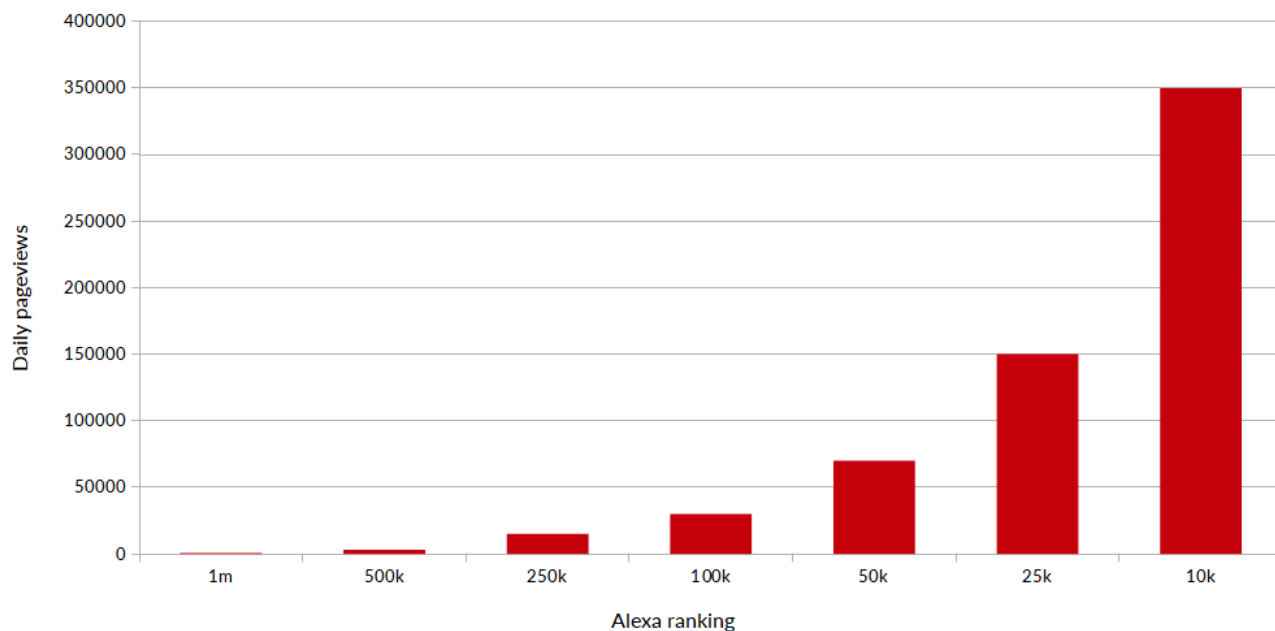
Obviously, we cannot know the exact mix that we will be dealing with at any given time once the network is functional. However, it is in our powers as a business to manage this mix in such a way as to produce the desired profitability results.

## Alexa Ranking and Approximate Daily Pageviews

Ranking	1m	500k	250k	100k	50k	25k	10k
Daily PVs	0.5k	3k	15k	30k	70k	150k	450k

Please, keep in mind that these numbers are rough approximations. Actual numbers may vary greatly between websites and depending on seasonality, trending content, and other factors.

## Alexa Ranking and Approximate Daily Pageviews



## Mix of Network Participants

Considering the participation of 100 content creator websites ranking 50k to 1m in Alexa:

- Blogs 1–10 are near 50k
- Blogs 11–25 are near 100k
- Blogs 26–45 are near 250k
- Blogs 46–70 are near 500k
- Blogs 71–100 are near 1m

Total pageviews (PVs) available for packaging for advertisers are:

$$\begin{aligned} & (10 \text{ websites} \times 2 \text{ ad positions} \times 70k \text{ PVs / day}) + (10 \times 3 \times 70k) + \\ & (15 \times 2 \times 30k) + (15 \times 3 \times 30k) + \\ & (20 \times 2 \times 15k) + (20 \times 3 \times 15k) + \\ & (25 \times 2 \times 3k) + (25 \times 3 \times 3k) + \\ & (30 \times 2 \times 0.5k) + (30 \times 3 \times 0.5k) = 7,700,000 \text{ ad views (AVs)} \end{aligned}$$

In the above case, we can offer 7.7 million ad views a day to advertisers. And we can package these ad views as follows:

- 10k ad views / day ... \$200 (or \$20 / 1k ad views)



- 25k ad views / day ... \$425 (or \$17 / 1k ad views)
- 50k ad views / day ... \$750 (or \$15 / 1k ad views)
- 100k ad views / day ... \$1,300 (or \$13 / 1k ad views)
- 250k ad views / day ... \$2,500 (or \$10 / 1k ad views)
- 500k ad views / day ... \$4,000 (or \$8 / 1k ad views)
- 1m ad views / day ... \$6,000 (or \$6 / 1k ad views)

If an advertiser purchases ad space for a campaign within the ad network worth at least \$50,000, they get extra ad views for free as a bonus.

Considering 20 advertisers, since for one advertiser we need at least five content creators to have enough ad space:

$(5 \text{ advertisers} \times 60 \text{ days} \times 200 \text{ dollars}) +$   
 $(4 \times 60 \times 425) +$   
 $(4 \times 30 \times 750) +$   
 $(3 \times 45 \times 1300) +$   
 $(1 \times 180 \times 2500) +$   
 $(2 \times 30 \times 4000) +$   
 $(1 \times 30 \times 6000) = \$1,297,500.00 \text{ USD}$

The remaining unused ad space can be filled with in-house ads promoting the network itself or ads bought at preferential rates by participating content creators to promote their website across the whole ad network.

This incoming ad revenue is then fairly shared with content creators depending on their actual pageviews. As our ad network will grow in time and our fixed costs will add up to a lesser percentage of overall revenue, we will offer content creators a revenue share of up to 75%.

## Revenue Approximation

Breakdown of approximate revenues for content creators according to their Alexa ranking:

- Each blog near 50k ... \$9800 USD / month
- Each blog near 100k ... \$4200 USD / month
- Each blog near 250k ... \$2100 USD / month
- Each blog near 500k ... \$420 USD / month
- Each blog near 1m ... \$70 USD / month

The highest revenue is achieved when cooperating with advertisers who purchase smaller ad packages (10k AVs / day to 100k AVs / day) for shorter time periods (3 to 6 months). On contrary, the lowest revenue is achieved when large advertisers gobble up big ad packages for

long time periods. Our preference will always be to diversify our portfolio of advertisers as much as possible, while at the same time maximizing profits for the company and our content creators as well.

In other words, our entrepreneurial profit motive is perfectly aligned with the motive to help content creators earn a living and with the motive to help smaller and medium advertisers to promote their brands, products, and service in our niche markets.

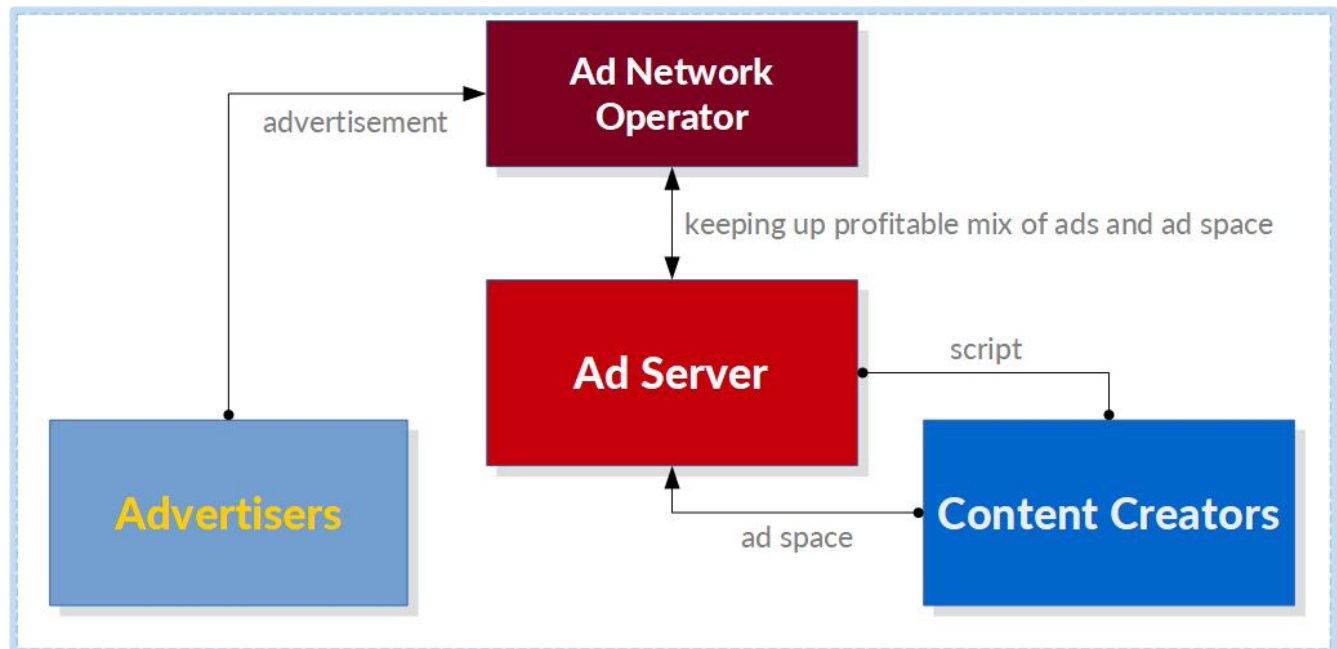
Since we don't have total control over the structure of advertisers in time, there will be a natural fluctuation in revenue for all participating content creator websites.

We will need to carefully manage the mix of purchased ad view packages, so that the overall revenue of our business, as well as that of our content creators doesn't decrease in time.

It's also noteworthy that network participants are all niche websites with a dedicated and growing user base. This means that there might be more advertisers eager to display ads on the network than the network can provide ad views. That's why the actual supply vs. demand structure might prove the above dollar prices per 1,000 ad views to be extremely conservative.

## 2. The Network

Our plan is to build an ad network of creative bloggers and content creators using the power of an Ethereum based [ERC20](#) Network token called CDX.



The network itself will function as a classic ad network serving ads to participating content creator websites based on a script included in said websites.

The script will notify the ad server whenever an ad has been displayed to a website visitor.

Payments from advertisers and payments to content creators will be ultimately settled in dollars. However, internally our systems will be using the ad network's own token.

### About the Content Creators

Even though our ad network is called the Commodity Ad Network, we would like to cater to a much larger audience.

Here is a non-exhaustive list of related niches that would be an extremely good fit for the network:

- precious metals research
- precious metals analysis
- oil and energy research
- oil and energy analysis
- forex and financial commentary
- chartists
- preppers
- authors outspoken against TPTB
- alternative news and media

Our goal is to create not merely an advertisement business but rather a network of creative minds. Minds that, given the opportunity, just might help change our future for the better.

Imagine how many more millions of minds could be reached by content creators who would be well compensated for their hard work. How much more motivated would these content creators be, if supported by a friendly ad network that shared its ad revenues with them fairly.

In the current system, large ad networks abuse content creators in several ways. Content creators get only pennies on the dollar of the ad revenue received by the ad networks. In some cases, certain niche websites might be even targeted to receive less revenue, so as to demotivate them from publishing their content. And to add insult to injury, these ad networks then take metadata from these websites about their visitors and sell them for further profits.

On the surface, it seems as if content creators get paid but what really happens is that their content and their metadata are taken from them in exchange for ridiculously tiny payouts.

Dear content creators, think about what a system like this does to your motivation to work, how it affects self-censorship of ideas and language, how it belittles you as a creative person. Many people feel sorry for child laborers in places like Bangladesh working for shoe-making companies. Well, if you are a content creator working for a large ad network, then you are effectively in the same position as that Bangladeshi kid, but you are probably getting paid less on a per hour basis.

We are personally offended by the way the large ad networks treat creative people, they stifle their work by hugely underpaying them and by doing so they are making sure that the system doesn't change.

It's a mind-bending situation, really. We have a bunch of creative people who openly speak out against this corrupt system of ours (fiat currencies, banksters, corrupt governments, regulatory overreach, etc.). Yet, they try to earn a living by monetizing their creativity and

thoughts using ad networks which are deeply embedded in the very same system they speak out against. And many people don't even realize this.

So this is why our goal is to create a network of creative minds.

Our goal is to liberate these creative individuals by connecting them into an alternative ad network. Where not only would they earn much more. But they would benefit from a boost to their website traffic thanks to the network effect as well.

The Commodity Ad Network is a network of the good guys, for the good guys.

We will start small, build a solid foundation, and if our business becomes successful enough, we will strongly expand on the possibilities of using digital cryptography in the network.

## About the Advertisers

Advertisers who would fit in well in the early versions of the Commodity Ad Network, will be presumably coming from the following markets:

- precious metals dealers
- coins and numismatics specialists
- precious metals miners
- commodity miners in general
- specialist financial institutions
- gun and ammo dealers
- self-defense providers
- specialist providers of prepper foods and tools
- security providers

Similarly to the list of related content creators, this is a non-exhaustive list of possible advertisers. Market realities will tell us exactly which specific categories of advertisers will show the most interest.

We also expect that as the Commodity Ad Network proves itself within its first year of existence as a stable and reliable provider of ad services, many advertisers standing on the sidelines will want to become network participants as well.

The ad network will always need to approve each new advertiser and each new campaign, so that we can make sure that our content creators and their website visitors are served with ads that live up to the highest ethical standards.

## About the Website Visitors

Our number one goal is to provide the website visitors of our content creators with a comfortable experience as it relates to ad placement and consumption.

We will take extraordinary care to work with advertisers who serve visually pleasing ads and ads that are not annoying in any way. We explicitly disallow any ads that use extremely bright colors, jumping images, pop-ups, automatically enabled sound effects, etc.

We also take the privacy of all website visitors very seriously. We do not collect any personally identifiable information or metadata. We are in the business of serving ads and doing so in the most ethical way possible. That's it. We leave the shady dealings to the largest ad networks.

## 3. The Technology

Many years of business expertise is needed to prepare a functioning business model that will stand the tests of competition and profit. It's much easier to dream up a technical solution to a problem, then to make sure that the real-world business application will not fail.

We are building the Commodity Ad Network first and foremost as a for profit business idea. It satisfies the self-interests of many parties (content creators, advertisers, website visitors), yet it still allows for the layering of technology on top of its business model.

### Architecture

At the core of the architectural design of the ad network are data sources filtered through or hosted on our hardware platform. On top of that, the ad server software communicates with all data sources using individually generated scripts.

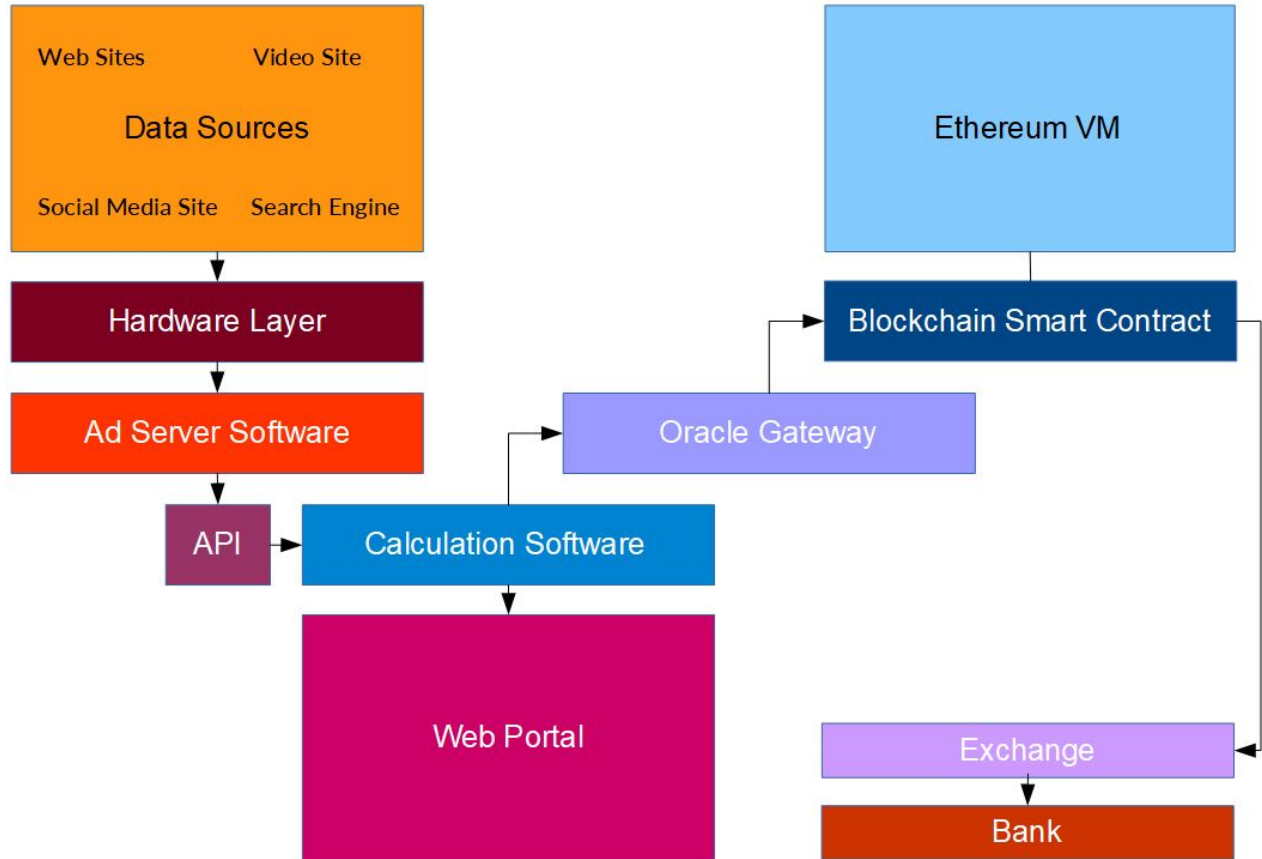
Further, a custom calculation software solution accesses the output from the ad server software to display certain information in our web portal's dashboard.

The ad server software has its own application programming interface (API) which can allow access to data from the outside. This API is utilized by the calculation software.

The calculation software then stores its data in a secure relational database within the web portal. The data in the database is then accessed by an oracle.

Using a gateway solution like this takes care of all the heavy lifting, so that only critical data is being sent to the Ethereum blockchain smart contract. This considerably lowers transaction costs as basically only payins and payouts are verified by the main net.

The schematic below shows a graphic representation of the Commodity Ad Network's full architecture.



## Code Numbering and Versioning

There are two ways we keep track of code. We ascribe a main number to each software package we create. This number is the same across all packages, if they belong to the same generation. Changing the generation number is a major step and it will only be done when the core code needs to be altered in a significant way for some reason. If such a change occurs, it must occur across all packages.

Furthermore, each individual piece of software within our architecture has its own version number. This number can be freely changed, as long as the upgrade of an individual package doesn't cause problems with the remaining packages. Such a system allows for streamlined upgradability of the whole architecture.



## Code Security

All code will be reviewed and tested for security issues by an in-house team of security experts, as well as an outside team. Minor version changes will be primarily handled by the in-house team. Whereas major generational number changes will be verified by the outside team as well.

## Hardware

The hardware solutions are handled by specialized next generation cloud based ad serving hosting, systems, and technology.

As we plan to add more and more content creator websites, the number of requests will be rising massively over time. Using such a specialized platform gets rid of any scalability issues and will allow our servers to handle billions of ad view requests per day.

## Ad Server Software

Revive Adserver is an open-source software which has its development roots in the early 2000s. Its security is well-tested in lots of real-world applications. It has a flourishing community of supporters who help to identify and resolve any potential bugs.

By working with highly experienced experts who have deep the knowledge of the innermost workings of the software, we can dramatically speed up our development process. We are absolutely sure that the initial development can be finished within two months.

Thereafter, we will have a live testing period of several weeks. Content creators who sign up with the ad network early, will participate in this live testing. The live testing will not be detrimental to their websites or ad revenues in any way.

## Basic Description of the Software

When a website visitor opens a content creator's web page, their browser executes the invocation codes included on that web page. Each ad request based on the invocation codes is received by the ad server and counted. The ad server then processes the ad request and selects an appropriate ad based on its internal delivery algorithm.

The browser receives the ad and renders it (i.e displays it) for the website visitor. Along with the ad, the ad server also sends an invisible pixel which, if rendered, sends a signal back to the

ad server. This signals to the ad server that it can go ahead and count an ad impression for that specific instance.

This setup is necessary to avoid counting views for ads that have not been displayed. Such a thing may occur for several reasons, among them ad blocking, broken header of the web page, missing ad in the zone from which an ad is being requested, etc.

## Campaigns

Campaigns are set up by our internal support team after careful consideration and discussion with each advertiser regarding their specific requirements.

What needs to be defined at the start of a campaign?

- the length of the campaign
- the zones (i.e. ad positions on content creator websites with specific dimensions) where the campaign ads will be displayed
- the creative for the campaign – these can be static images, HTML code, Flash banners, texts, or videos

It's best to create the ads for all available zones in the ad network, so that the campaign has a maximum success rate and so that the ads can be rotated on content creator websites at all times.

Campaigns can be specifically targeted using a variety of filters, such as IP addresses, geographic locations (e.g. countries, cities), or by the technology used by the website visitor (e.g. operating system, browser).

There are several aspects of campaign statistics that can be collected and recorded. These are ad requests, ad impressions (ad views), ad clicks, and ad conversions.

It is also possible to utilize retargeting based on website visitor behavior. However, given that we respect the privacy of our website visitors, we will not be using any retargeting. If we ever decide that it might be beneficial to add retargeting to the mix, we will set up a simple system that will enable website visitors to opt out of any retargeting.

## Statistical Data Manipulation

There is no way to manipulate the statistical data from the outside. The data is kept in a secure database which has been time tested in various environments.

Data manipulation could be available to senior personnel of the Commodity Ad Network. However, such manipulation would serve no purpose at all. Any incentives to manipulate data are eliminated by not using a bidding mechanism for price discovery. In other words, since we get paid a flat fee per a thousand ad views, there is no motivation for us to engage in unethical behavior.

Furthermore, even if a rogue actor should emerge within the company, the manipulation that they could achieve would be highly limited as the statistical data are updated and finalized daily.

Ad view manipulation by content creators or other parties is of negligible consequence as well. The ad server involves logic to filter out bots or refreshers. The ad network also promises to severely punish content creators who would engage in any unethical behavior.

## **Payout Calculation Software**

This custom software uses the analytics recorded and stored within the ad server software to calculate the amounts that should be paid out to a content creator for a specific period of time.

Each content creator is onboarded into the ad network on a specific day and their monthly revenue is calculated starting on that day. For example, if a content creator is on-boarded on January 12, then their payout calculation will take place on February 12, then March 12, and so on. The actual payouts will take place 14 days later to allow for random human supervision.

The calculations are quite complex and take into account the number of ad views served on the content creator's website, as well as the overall number of ad views served within the whole network in that same period of time.

## **Oracle Gateway**

Once the calculation of the content creator's share is done, the result is securely stored in the web portal's database.

The next step is to earmark the correct amount of CDX tokens in the currently available token pool for conversion into fiat currency.

This step is done by an oracle gateway which is able to access the calculation results in the web portal's database and, in turn, provide this data to the smart contracts on the Ethereum blockchain.

This setup is very beneficial because all the heavy lifting is done locally, in order not to use the Ethereum blockchain excessively. The blockchain is only used for critical data processing and verification, such as the conversion of tokens at pay-ins and pay-outs.

Keeping most of the data off the blockchain and in secured local environments, enables the ad network to process a much larger scale of data analytics at a fraction of the cost.

## **Ethereum Blockchain Smart Contracts**

The set of smart contracts embedded into the Ethereum blockchain take care of all settlement processes of tokens.

For scalability and other beneficial practical purposes, we might decide to expand the features of the CDX token in the future. There might be an insufficient amount of tokens available on the open market, so we might opt to include an inflationary model into the new token. It might also be necessary to revise the token after we establish ourselves in the market.

In any case, we will allow for the exchange of old tokens for new ones, as if it was a software upgrade. A token upgrade will never be detrimental to a token holder.

## **Web Portal**

The web portal is a cloud-hosted customized content management system (CMS) solution with its own secure database. The web portal handles the registration of network participants – this can be done only by in-house personnel with the necessary permissions.

## **Content Creator and Advertiser Verification**

All network participants will be vetted and verified by our support team. Self sign-up is not a possibility within the Commodity Ad Network. Our verification process is aimed at making sure that only content creators and advertisers who will bring maximum value to the whole network, will be allowed in. It also enhances the security of our systems as bots and bad actors are weeded out at a very early stage.

## Process Walkthrough

The first step for a content creator is to fill out the relevant [application form](#). Given that the application is approved, the content creator will be then signed up and allowed access to the web portal's dashboard. They will receive their login credentials and will be able to log in to the web portal's dashboard.

Inside, they can manage their profile or open a ticket with our support team. Once they are on-boarded, they can review current and archived statistics and analytics for their own websites.

For advertisers, the process is almost identical. First, an advertiser needs to fill out the relevant [application form](#) in order to be approved, signed up, and on-boarded. Then they can access the web portal's dashboard using the login credentials sent out to them.

In addition to all the features mentioned above for content creators, there are some additional features accessible to advertisers only.

Advertisers can upload their campaign creatives, they can monitor their campaign assets, and they can access reports generated for their campaigns.

The general public has no access to the web portal, but they can still see on the blockchain that the overall payins and payouts makes sense and, thus, that the data is not being manipulated in any way.

When thinking about the Commodity Ad Network's technological solutions, we always had three goals in mind:

1. Give out tremendous value and cater to the self interest of each network participant (i.e. advertisers pay in less and achieve higher returns on investment, content creators get paid much more and are motivated to create new content, website visitors are motivated to turn off ad blockers and consume more content).
2. Set in place mechanisms to maximize the utility of the network effect which will help achieve dramatic growth in traffic for the entire ad network.
3. Incentivize all network participants to behave ethically, so that the value inherent in the network is not corrupted.

Obviously, technology is a very important part of the Commodity Ad Network but it's not a panacea. Some problems can't be solved just by throwing technology at them.

In our case, we need to have people with a deep knowledge and understanding of the alternative media community. We also need a correctly motivated staff to enforce the ethical standards our ad network stands for. Is an advertiser offering products and services that are beneficial, or is it just a scam or a pump-and-dump scheme? Is a content creator trying to manipulate their ad views in some way? These questions can't be answered by a software tool. We need knowledgeable people to make such judgements and decisions.

In our opinion, companies that rely purely on technology are destined to fail. Human profit motivation, human decision-making, and human self-interest are what make a business work. Technology can be layered on top of this but it can't play an exclusive role.

The largest ad network proved this point best. First, it killed all the offline advertisement systems. Then it threw small businesses in the ring with multibillion dollar companies. Obviously, the small businesses didn't have a fighting chance... And, finally, it is now succumbing to the nihilism of its own technology with profits from advertisement being virtually non-existent.

We don't think that there was any intentionality in this process. It took place over more than a decade as a lot of moving parts in the industry have gradually changed. The auctioning model of selling online ads was a good idea back in the day when mostly small businesses participated in the ad system. However, as larger advertisers came online, it all got out of hand very quickly.

On the other hand, we must be careful about our technological solutions as well.

The field of digital cryptography is progressing at an insane speed. It would be unwise to start creating complex systems right now. In a year, we could find that everything we have built is already legacy software, because some genius just came up with a new revolutionary way of doing things. Pacing ourselves in this case makes a lot of sense.

The regulatory environment in relation to these new technologies is far from being established. Don't get us wrong, We would love it if the bureaucrats of the world would leave crypto currencies alone. But we all know that's not going to happen. So, again, we need to see what regulatory framework will be put in place in the next year or so, so that we don't set up expensive systems too soon, just to find out that due to regulations, we need to change half the things we have implemented. Again, slow and steady wins the race.

## 4. The Roadmap

### September 2015

Development of the Commodity Ad Network business model begins.

### April 2016

First version of the ad network's website goes live.

### June 2017

Development of the ad network's token begins.

### July 2017

Current version of the ad network's website goes live.

### August 2017

Promotion of the ad network begins both online and offline.

### September 2017

Development of our custom software begins.

Selection of staff for all network teams begins.

### October 2017

Reaching out to content creators begins.

First version of our custom software and of the web portal finalized.

Listing of our token on exchanges is requested.

### November 2017

Reaching out to advertisers begins.

Further development and customization of our software.

Our token is listed on exchanges.  
First content creators signed up with the ad network.

## December 2017

Live testing of ad server and network capabilities.  
All team members are selected and on-boarded.  
First advertisers signed up with the ad network.

## January 2018

On-boarding of first content creators.  
Ad network goes live with advertisers' ad campaigns.

## February 2018

First payouts to content creators who were on-boarded in January.

## By the end of 2018

50 additional content creators onboarded a month.  
10 additional advertisers contracted a month.  
Improvements to existing software solutions.

## Beyond 2018

Further improvements to existing software solutions.  
Video portal for content creators goes live.  
Social media portal for content creators goes live.  
Own search engine solution goes live.  
Growth beyond original niche markets.



## Summary

The current online advertisement industry is broken. It does not benefit anyone except for the operators of the largest ad networks.

It needs to be said that if anyone has access to the latest technology and to untold numbers of technical experts, it is the largest ad networks. So the problem is clearly not in the lack of technology. Something much more is missing here – ethics first and foremost. Having at heart the best interest of advertisers, content creators, and website visitors. It seems that human motivation is not driven by technology alone.

The problem for content creators is two-fold.

1. The largest ad networks obviously engage in practices that most people don't approve of, such as excessive collection of private data, sharing information with certain agencies, keeping an extreme portion of incoming ad revenue, not being fully transparent on their finances, and paying content creators less and less over time.
2. Alternative ad networks that are popping up all the time are no better either. If anything, they are even less transparent in their activities. Even if they promise higher payouts, it's usually a 20% increase. However, content creators cannot be sure that they'll even get paid. The ad company may vanish the same way it has appeared.

On the other hand, advertisers, especially the small and medium ones, are not happy with the current system either. Businesses with very large budgets don't really care because they have whole departments that work on their ad campaigns. They are able to work the system in their favor.

Small and medium advertisers have two problems as well.

1. They get priced out of certain markets, because the bidding mechanism that is at the heart of the current large ad networks naturally prefers advertisers with the largest budgets.
2. They receive no transparent information about what portion of their budgets went to content creators and what was kept by the ad network. Even if the ad networks told everyone some numbers, there is absolutely no way to verify whether the information given is correct and truthful.

Small and medium advertisers would welcome the Commodity Ad Network as an ethical alternative to the current largest ad networks in the same way as content creators would.

However, it needs to be noted that recently large businesses have been also re-evaluating the profitability of the pay-per-click business model. For a variety of reasons (bot clicking, ads displayed on irrelevant websites, ad blocking by users), they are increasingly slashing their ad budgets. We believe that in a few years, when our ad network grows large enough, these large advertisers will welcome our innovations as well.

Website visitors struggle with two problems as well:

1. They are being served annoying and largely irrelevant ads that serve no purpose in their lives whatsoever. For this reason, an increasing number of website visitors turns to ad blocking software. But ad blocking punishes all advertisers regardless of the value their ads might bring to website visitors.
2. Personal information about website visitors is routinely collected by the largest ad networks. These ad networks claim that collecting this data helps them in their business decisions, but real-world facts show that collecting such data helps nobody but certain agencies. The question then arises what arrangement is there between the largest ad networks and the governments of the world. It is sage to say that whatever the deal is, it doesn't benefit the website visitors.

The Commodity Ad Network is set up right from the start in a way that will serve the self-interest of all three groups – content creators, advertisers, and website visitors. It solves all of the above mentioned issues and introduces new benefits to all parties.

The Commodity Ad Network is an ethical ad network with entrepreneurs who make sure that there are no shenanigans and backdoor deals going on. At the same time, it implements modern technology to the fullest extent, so as to make business processes fast, transparent, and cost-effective.

However, we need to be realistic about which processes can and which ones cannot be fully automated. Entrepreneurial oversight at crucial moments is still needed and desirable.

The best way forward today is to blend entrepreneurship with technology to achieve a more democratic, more transparent, and more ethical business environment. And that's exactly our aspiration with the Commodity Ad Network.

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