AP/AD

The Artist Approved Standard Tokens:
Disrupting the global economy to empower creative output
By introducing AP and AD through the Blockchain community

Artist Approved Physical and Digital Tokens (“APAD”)

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White Paper by

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1. **Introduction**

The aim of this paper is to review the current adoption of NFT solutions, in particular in the creative industry. The paper highlights certain shortcomings which current ecosystems are exhibiting and then puts forward an alternative solution in the form of Artist approved Physical and Artist Approved Digital Tokens Standard (“APAD”). APAD tokens which will provide a market changing disruptive alternative to the options currently available to creators wishing to tokenize some of their rights to art work to optimally exploit their rights in relation to their creation.

2. **NFTs-based creative market is growing**

2.1 Non-Fungible Tokens ("NFTs") are crypto collectibles which have exploded in popularity over the last few years, with record sales on multiple and competing platforms making news headlines on a daily basis.

2.2 Tokenization of creative output has two key benefits if applied correctly:
   
   (A) Rights pertaining to a creative creation can be more accurately dissected and different aspects of them can be exploited separately;
   
   (B) Those carefully defined rights are given liquidity on the secondary market.

2.3 This trend is not only growing, but here to stay, having recently attracted mainstream art collectors for the first time. The recent sale of NFTs affiliated with Andy Warhol has confirmed that NFTs are instruments that collectors can trust and easily value.\(^1\) This will herald the way for more NFTs affiliated with renowned creators to be sold at auctions, physical or online.

2.4 This is welcome news for both creators and collectors, as recent sales have attracted not only the cryptocurrency community but also established collectors who would usually choose purely physical artworks. Therefore we see the target market fortokens representing rights to artistic creations to be exceptionally broad as different elements of the product cater towards needs of creators and collectors across industries.

2.5 Given the sudden rise in NFTs in the creative space, we believe that the ecosystem has not yet matured in a way which has succeeded in tailoring the NFT products available to the creative industry in an optimal way.

"There is an inefficiency in the transfer of the IP and its terms of use. Therefore, NFTs are obsolete." (Abdullah Qandeel)

2.6 The current NFT solutions available in the creative space have shown certain shortcomings whereby their characteristics are not yet optimised in a way which accounts for the particular needs of creators and collectors. We have identified some of the challenges currently presented by existing solutions below and will then proceed to set out how the new APAD standard is going to disrupt the market and provide effective solutions to the challenges faced to date.

3. First challenge: Current NFTs do not include IP

3.1 NFTs do not contain the property rights in relation to the creation being tokenized. This creates substantial insecurity in relation to the rights allocation between the creator and the collector.

3.2 Given that the NFT itself does not purport to transfer any IP rights, the inference would be that it remains with the creator. However, in practice:

(A) Collectors are often not aware of the limited rights they are truly obtaining when buying an NFT. They may think they are obtaining certain rights to the underlying copyright when they are not in fact granted any such rights.

(B) Creators are left vulnerable with buyers of the NFTs mistakenly exploiting IP rights they have not been granted in the token.

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2 Due to varying update cycles, statistics can display more up-to-date data than referenced in the text. https://www.statista.com/topics/7626/crypto-art/#dossierSummary.
4. **Second challenge: Current NFT solutions do not equitably remunerate the creator in secondary market transactions**

NFTs are ‘smart contracts’, which are computer protocols, that aim to digitally facilitate, verify, or enforce the negotiation or performance of a contract. They allow the performance of credible transactions without third parties. Smart contracts written into the code of NFTs allow for the distribution of funds for the payment of royalties to the creator each time the work is resold. However, these automated resale royalty payments might not occur unless the NFT is resold through the same platform. US law does not recognize resale rights relating to creative works, so the law provides no recourse for unpaid resale royalties in the US, as it does in approximately 70 other jurisdictions, including the UK and the EU.

5. **Third challenge: Creators are not able to customize the terms on which they grant rights to their creations**

Current NFTs do not provide a clear and systematic structure for the creator to tailor the terms under which he/she is transferring certain carefully defined rights to his/her creation and on what terms.

6. **Fourth challenge: Hidden costs for creators**

Moreover, today digital creators choosing the NFT route experience a substantial opportunity cost, as their art needs to be auctioned on certain platforms that take a minting fee, which can be considerable, depending on many variables from file size, to network traffic and others.

7. **Proposed solution: A new fair and equitable approach to token-based creation to disrupt the current market**

7.1 The future lies in an ecosystem which conveys the ability to tokenize creative energy which will benefit everyone who has the capacity to create. Furthermore, we need to bring this tokenized data to the physical world as an asset to be enjoyed and traded. In other words, what is required is the ability to commercialize tokens in a fair way that will allow both the creator and the collector to benefit on a large scale.

7.2 This will drive the growth of the sector of creative tokenized energy exponentially, on the basis of a fair and equitable manner that will revolutionize the current way tokens related to creative output are minted and traded.

7.3 Therefore, the current system of NFTs needs to be fundamentally disrupted to allow for an inclusive approach to all creators. This will benefit the sector as a whole, as it will encourage more creative output generating more minting, which will deliver more reach to more collectors.

8. **Scope of application: What types of creative data can be tokenized?**

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The new AP/AD Standard allows only the initial creator of any creation in the physical world or digital world respectively to tokenize the rights to his or her work. Only original creations can be tokenized in such a way and only by the initial creator him or herself. Any creation which conveys copyright in the work to the creator can be tokenized in such a way and the APAD ecosystem encourages a broad application of its functionality across all areas of the creative industry.

9. A new and disruptive token ecosystem: A game changer for the creative industry

9.1 The APAD token has three key components which distinguish it from the NFT tokens currently available in the market:

(A) Full IP transfer:

(1) Smart contracts which include the intellectual and property rights of the token will be embedded automatically within each AP/AD, allowing to exploit the asset, while protecting creators’ rights;

(2) Fees are also embedded into that smart contract and

(3) This contract will become a standard embedded in all AP/AD-tokens.

(B) CTU specifies the scope of the IP rights embedded in the token:

(1) For AD digitally;

(2) For AP physically (e.g. the application of the paint to The King Of Offset) and digitally (e.g. the skin of the artwork that can be used in video games) and

(3) The Certified Terms Of Use (CTU) is prepared prior to the minting by the creator.

(C) The smart contract embedded within the token includes Enhanced Royalty System (ERS):

(1) Minting: platform takes minting fee of 2% from creator;

(2) First transaction: platform takes 2% success fee and creator retains 98% and

(3) Every secondary market transaction: platform takes 2% success fee and creator receives 16% of capital gain realised upon resale; if no capital gain, platform still receives the 2% success fee.

9.2 Furthermore, what sets APAD apart is that it cuts out the middle man and allows for direct exchange between creators and collectors, providing the platform for this purpose.
10. **A new industry standard for tokens**

10.1 To fuel this ecosystem, a new industry standard for tokens is required that remedies these shortcomings, which are robbing creators of their creative and commercial rights. This new standard will not be limited only to digital creation as it is today. It will apply to all forms of creations, physical as well as digital. The new standard will feature new class of token that we have introduced: Artist Approved Physical and Digital Tokens ("APAD"). The tokens will be aligned with the following types: Artist Approved Physical Asset ("AP") and/or Artist Approved Digital Assets ("AD"). Each of these types of token has the following three sub-categories: (i) Series Tokens, (ii) Fractional Tokens and (iii) Collective Tokens.

10.2 The APAD-Ts are a first of a kind token which constitutes a marriage of the physical and digital asset. Therefore, every APAD-T contains both rights to the physical creation in the real world and a corresponding right to a digital creation. These aspects are combined in the token and cannot be separated from one another.

10.3 Types of token under the AP/AD Standard:

<table>
<thead>
<tr>
<th>Type of Token</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fractional Tokens:</strong></td>
<td></td>
</tr>
<tr>
<td>AP(^{f})</td>
<td>Represents the right to a fraction of the physical and digital (AP(^{f})) or only digital (AD(^{f})) components of a creation, e.g. TKKO (AP(^{f}))(^{50,000})</td>
</tr>
<tr>
<td>AD(^{f})</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. Physical: Token holder receives 1\textsuperscript{50,000}th dividend after TKOO sale (Physical Artwork)</td>
</tr>
<tr>
<td></td>
<td>2. Digital: Token Holder receives Full IP of Artwork in digital form (low poly count model, multi-platform application)</td>
</tr>
<tr>
<td></td>
<td>3. Token holder receives 30 x 20 cm Hand Drawn Artwork by Qandeel (unique feature of this token; non-tokenizable)</td>
</tr>
<tr>
<td><strong>Series Tokens:</strong></td>
<td></td>
</tr>
<tr>
<td>AP(^{s})</td>
<td>Relates to physical assets in the real world which have been created as a series, e.g. TKOO Livery (AP(^{s}))(^{10})</td>
</tr>
<tr>
<td>AD(^{s})</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. Physical: 10 prints</td>
</tr>
<tr>
<td></td>
<td>2. Digital: 1/10 proportion of digital artwork</td>
</tr>
</tbody>
</table>
Collective Tokens:
- AP<sup>c</sup>-T initially minted not by an individual but by several individuals acting as a collective, e.g. (A<sup>c</sup>-T)<sup>2</sup>
- Represents the physical and digital rights to a painting which was co-created by two creators who jointly minted the creation

10.4 Creation functions to allow artist to select and add customized terms of which they can grant permissions under the smart contract for use to the rights of their creations. Artist can select to allow renumeration from resale of APAD art through the platform. The smart contract allows for original artist to revoke permissions if required, or alter and change.

10.5 In terms of practical steps for tokenizing a physical asset, the APAD standard has developed a unique certification method which involves the creator submitting three identification images of the work to the community. The latter will then verify the creation's authenticity as well as the creator's ability to submit the work for tokenization, i.e. by confirming he or she is indeed the original creator of the work. The community to make the assessment will initially be a small circle made up of the founding team of the ecosystem. However, there will be a rating system of the quality of assessment decisions over time and an increasing number of high-quality rating parties will be utilized. REAT (Real Estate Asset Token [https://reat.io]) will administer the community and create the real physical asset and do initial assessment of creators original work in order to create the tokenization of the individual asset.

11. Creating a transparent and direct exchange

Another barrier to NFT creators and collectors alike today is the lack of an optimized marketplace that properly caters to the needs of the participants in the ecosystem. Today’s marketplace works against both creator and collector. Rather than bringing these two parties together, market forces have positioned themselves in between them, taking advantage of both creator and collector alike for financial gain. Creators and collectors meet on a limited number of platforms which take a certain minting fee, which can be substantial, and again result in an opportunity cost for creators. This fundamental issue will be addressed by removing the middleman to create a direct link and exchange opportunity between creator and collector, across multiple mediums and through the use of highly transparent and efficient blockchain technology. This requires the creation of a new type of marketplace.
12. **Governance Excellence**

12.1 APAD is an open standard that is 100% de-centralized data, aligned with all KYC international standards of public record, enabling the delivery of better compliance outcomes, increased efficiency, and improved collectors’ experience.

12.2 Creators will feel confident that their image and brand will be protected and will not be diluted or tarnished. Collectors will equally take confidence in the stringent KYC protocols APAD will place on all creators joining our platform to ensure a transparent process that leaves all parties satisfied.

13. **Conclusion**

13.1 In summary, adopting the new AP/AD Standard is disruptive on many levels.

13.2 The commercialization of creative energy in this manner will be a game changer to the industry, allowing both the creator and the collector to benefit on an unprecedented scale. With their huge potential, AP/AD will be considered as a future investment option and trading instrument in the coming years like other nascent crypto currencies. The opportunity for a single AP/AD to be shared among several owners, and be partially tradeable, will increase the overall trade volume of AP/AD.

13.3 Creatively, the adoption of the new AP/AD Standard will lead to a global increase in creative output overall, with creators encouraged to produce both physical and digital assets. The two worlds will continue to be separate yet also allowing them to merge, thereby creating a whole new dimension at the service of the creative industry. It will also encourage a co-creation community, shaping the future of innovation.

13.4 We invite all creators and collectors across the world to join the movement and adopt AP/AD as not only the new standard for the creative industries, but as a determining factor for the future of creativity and by association the future of culture for many generations to come.
14. **Preview of global event and variables for APAD Standard**

```solidity
pragma solidity ^0.7.0;

contract APAD {
    // Declare state variables in this section
    uint8 public avgBlockTime; // Avg block time in seconds.
    uint64 private decimals; // Decimals of our Shares. Has to be 0.
    uint256 public totalSupply; // By default 100 for 100% ownership. Can be changed.
    uint256 public accumulated; // Globally accumulated funds
    string public name; // The name of our (token). Can be determined in Constructor _assetID
    string public symbol; // The Symbol of our (token). Can be determined in Constructor _assetSymbol
    address public physicalAsset; // Physical Asset Owned Token
    address public digitalAsset; // Digital Asset Owned Token
    address public artist; // Artist Address
    address[] public stakeholders; // Array of stakeholders.

    // Define events
    event ShareTransfer(address indexed from, address indexed to, uint256 shares);
    event Seizure(address indexed sellerto, address indexed to, uint256 shares);
    event ArtisticDefinitions(uint256 NewMax);
    event MakeFractionalToken(address artist);
    event MakeSeriesToken(address artist);
    event MakeCollectiveToken(address artist);
    event NewStakeholder(address StakeholderAddress);
    event AvgBlocktimeChange(uint8 new);
    event StakeholderBanned(address banned);
    event RevenueDistributed(address artist, uint256 gained, uint256 total);
    event SharesOffered(address Seller, uint256 AmountShares, uint256 PricePerShare);
    event SharesSold(address Seller, address Buyer, uint256 SharesSold, uint256 PricePerShare); // fractional Tokens

    // Stakeholder functions
    function offerShare(uint256 shareOffered, uint256 shareOfferedPrice) public {
        // Stakeholder can offer # of Shares for Price per Share
        (bool _isStakeholder, ) = isStakeholder(msg.sender);
        require(_isStakeholder);
        shareOffered += shareOfferedPrice;
        emit ShareOffered(msg.sender, shareOffered, shareOfferedPrice);
    }

    function buyShare(uint256 shareBuy, address payBy_new, payable msg.sender) public payable{
        // Stakeholder can buy shares from seller for sellers price * amount of shares
        (bool _isStakeholder, ) = isStakeholder(msg.sender);
        require(_isStakeholder);
        shareBuy += shareBuyPrice; // shareBuyPrice = SharesOffered[msg.sender] * shareOffered[msg.sender] & shareBuy == shareBuy[msg.sender] & shareBuy == shareBuy[msg.sender] & shareBuy == shareBuy[msg.sender];
        allowShare(msg.sender, shareBuy);
        shareOffered[msg.sender] -= shareOffered[msg.sender];
        shareOffered[msg.sender] -= shareOffered[msg.sender];
        shareOffered[msg.sender] -= shareOffered[msg.sender];
        shareOffered[msg.sender] -= shareOffered[msg.sender];
        _from.transfer(msg.value);
        emit ShareSold(msg.sender, msg.sender, sharesSold, shareSoldPrice, from, to, value);
    }

    function transfer(address recipient, uint256 amount) returns (bool) {
        // transfer of token, requires isStakeholder
        (bool _isStakeholder, ) = isStakeholder(msg.sender);
        require(_isStakeholder);
        require(msg.sender != msg.sender);
        share[msg.sender] += amount;
        share[recipient] += amount;
        emit ShareTransfer(msg.sender, recipient, amount);
        return true;
    }

    function claimOwnership() public {
        // Claim main ownership
        require(msg.sender != msg.sender) & msg.sender == msg.sender && msg.sender == msg.sender;
        emit MainPropertyOwner(msg.sender, msg.sender);
    }
}
```
//functions of Artist functions

function addStakeholder(address _stakeholder) public onlyArtist {  //can add more stakeholders.
    _isStakeholder[ _stakeholder ] = true;
    if (_isStakeholder[ _stakeholder ])
    //stakeholders.push(_stakeholder);
    uint256 _amount = MAX_UINT256;
    emit NewStakeholder(_stakeholder);
}

function banStakeholder(address _stakeholder) public onlyArtist {   // can remove stakeholder from stakeholders array and...
    if (_isStakeholder[ _stakeholder ])
    //stakeholders[_stakeholder].length = 0;
    stakeholder.pop();
    msg.sender.transfer(_stakeholder); //...seizes shares
    emit StakeholderBanned(_stakeholder);
}

function setNftSale(uint8 _nftSale) public onlyArtist {              //set amount that creator can recieve from secondary sale
    require(_nftSale > 0, "Valid numerator rate (0% - 100%) required")
    emit ChangeNftSaleValue(_nftSale);
}

function setAvgBlockTime(uint8 _sPerBlock) public onlyArtist {     //we do not have a forgery proof time measurement in Ethereum. There
    require(_sPerBlock > 0, "Please enter a Value above 0");
    avgBlockTime = _sPerBlock;
    blocksPerDay = (60 * 60 * 24) / avgBlockTime;
    emit AvgBlockTimeChanged(avgBlockTime);
}

function distribute() public onlyArtist {                           //
    uint256 _accumulated = accumulated;
    for (uint256 s = 0; s < stakeholder.length; s++)
        //address stakeholder = stakeholder[s];
        uint256 _shares = _sharesOf(stakeholder[s]);
        uint256 _etherReceived = (_accumulated / totalSupply) * _shares;
        accumulated = accumulated - _etherReceived;
        revenues[stakeholder[s]] = revenues[stakeholder[s]] + _etherReceived;
        emit RevenueDistributed(stakeholder, _etherReceived, revenues[stakeholder[s]]);