

# PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: <b>LIU, Shuaimin</b>  <b>650 Page Mill Road Palo Alto,                  California 94304 USA</b>	<h2 style="margin: 0;">PCT</h2>  WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY  (PCT Rule 43bis.1)	
Applicant's or agent's file reference <b>24286-721A602</b>	Date of mailing (day/month/year) <b>02 February 2026</b>  <b>FOR FURTHER ACTION</b> See paragraph 2 below	
International application No. <b>PCT/US2025/049220</b>	International filing date (day/month/year) <b>02 October 2025</b>	Priority date (day/month/year) <b>04 October 2024</b>
International Patent Classification (IPC) or both national classification and IPC <b>G06Q 20/06(2012.01)i; G06Q 20/02(2012.01)i; G06Q 20/40(2012.01)i; G06Q 20/38(2012.01)i;                  G06Q 40/04(2012.01)i; H04L 9/00(2006.01)i</b>		
Applicant <b>MSHIFT, INC.</b>		

<p>1. This opinion contains indications relating to the following items:</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Box No. I Basis of the opinion</li> <li><input type="checkbox"/> Box No. II Priority</li> <li><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li><input type="checkbox"/> Box No. IV Lack of unity of invention</li> <li><input checked="" type="checkbox"/> Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement</li> <li><input type="checkbox"/> Box No. VI Certain documents cited</li> <li><input type="checkbox"/> Box No. VII Certain defects in the international application</li> <li><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</li> </ul> <p>2. <b>FURTHER ACTION</b></p> <p>If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.</p> <p>If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.</p> <p>For further options, see Form PCT/ISA/220.</p>
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Name and mailing address of the ISA/KR <b>Ministry of Intellectual Property                  189 Cheongsa-ro, Seo-gu, Daejeon,                  35208</b>	Date of completion of this opinion <b>02 February 2026</b>	Authorized officer <b>LEE, Kang Ha</b>
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WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US2025/049220

Box No. I

Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
  - the international application in the language in which it was filed.
  - a translation of the international application into \_\_\_\_\_ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
2.  This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(b)).
3.  With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
  - a.  forming part of the international application as filed.
  - b.  furnished subsequent to the international filing date for the purposes of international search (Rule 13*ter*.1(a)),
    - accompanied by a statement to the effect that the sequence listing does not go beyond the disclosure in the international application as filed.
4.  With regard to any nucleotide and/or amino acid sequence disclosed in the international application, this opinion has been established to the extent that a meaningful opinion could be formed without a WIPO Standard ST.26 compliant sequence listing.
5. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	<u>1-24</u>	YES
	Claims	<u>NONE</u>	NO
Inventive step (IS)	Claims	<u>3,6,9-15,17-24</u>	YES
	Claims	<u>1-2,4-5,7-8,16</u>	NO
Industrial applicability (IA)	Claims	<u>1-24</u>	YES
	Claims	<u>NONE</u>	NO

2. Citations and explanations:

Reference is made to the following documents:

D1: CITI, Industry Revolution Volume IV – The Convergence of The Crypto and Traditional Economies: How Investment Managers can Deliver Value in a Decentralized "NewFi" World, Business Advisory Services, June 2021

D2: STRATEGIC INVESTMENT RESEARCH MENG HAORAN, An in-depth explanation of the Ve governance custody track that combines rights and benefits, Binance Square, 29 March 2024

D3: HARSHITA SHRIVASTAVA, What Are Inflationary And Deflationary Cryptos?, wazirx, 24 November 2023

D4: KR 10-2579119 B1 (KOONG WORLD INC.) 18 September 2023

D5: Digital Assets: Let's Talk about Token, Six, Blog, 16 February 2023

I. Novelty and Inventive Step (PCT Article 33(2) and (3))

1. Claims 1-16

1.1. Claim 1

D1, which is considered to be the closest prior art to the subject matter of claim 1, discloses a method for a decentralized platform (see page 28, right col. lines 13-17), comprising: deploying a digital asset inside of a token structure and pairing it with an embedded smart contract, wherein a token comprises a utility token that has a transactional relationship and a governance token that has a stakeholder relationship (see page 21, right col. lines 20-24; page 79; chart 5.4); issuing, by DAO, the governance token to individuals (see page 30, right col. lines 47-49); creating a utility token that requires a user to purchase access (see page 77, left col. lines 20-24); rewarding those that participate in the services of a Dapp or the running of the DAO, wherein the DAO may govern on-chain pro-to-companies through the use of smart contracts and code (see page 32, left col. lines 8-12; page 42, left col. lines 23-27); and adjusting an interest rate charged for a DAI stablecoin (see page 42, left col. lines 42-46).

Claim 1 differs from D1 in the features of issuing the currency token upon satisfaction of issuance criteria comprising a predetermined trading time of the governance token; and dynamically adjusting an interest rate credited to holders of the currency token based on one or more indicators of inflation or deflation, so as to stabilize the value of the currency token and maintain the decentralized monetary system without central authority intervention. However, the different features would be easily derived from a combination of the disclosures of D1 (see page 31, left col. lines 2-6: the MKR governance token is required to vote on the parameters of MakerDAO) and D2 (see page 1, line 27 - page 2, line 15; page 5, lines 18-19; page 8, lines 10-13: veToken is a non-transferable and non-circulating governance token; the core is an agreement to obtain voting custody veToken by locking the token for a predetermined period of time; for example, \$CRV holders can lock \$CRV for a certain period of time to obtain veCRV; according to its veToken weight, users can obtain corresponding proportions of income and other rights and interests; and when users participate in transactions and lock Tokens, they can obtain the governance rights of the protocol, including Token inflation and deflation modes, whether additional Tokens will be issued in the future, considering liquidity pool transaction parameters and the revenue ratio of a certain liquidity pool LP, and platform transactions Cost sharing ratio).

WRITTEN OPINION OF THE  
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International application No.

PCT/US2025/049220

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Accordingly, claim 1 would have been obvious to a person skilled in the art over D1 in view of D2. Therefore, claim 1 lacks an inventive step.

1.2. Claims 2, 4-5, 7-8, and 16

The additional feature of claim 2 would be easily derived from the disclosure of D1 (see page 31, left col. lines 1-2: a governance token enables anyone with interest to buy into the DAO and help to run the Dapp).

The additional features of claims 4-5 would be easily derived from the disclosure of D3 (see page 1, lines 1-6; page 2, lines 4-9; page 4, lines 2-4: an increase in the cost of goods and services is called inflation; when there is an excess of currency in circulation, the value of money depreciates; deflation is the term that describes a rise in a currency's value and a corresponding decrease in the cost of products and services; a decrease in the currency's supply is typically the cause of deflation; inflationary cryptos represent a unique subset within the broader realm of digital assets, characterized by a deliberately designed mechanism to increase the token supply over time; and deflationary cryptos constitute a distinctive category within the crypto ecosystem, characterized by a deliberate and programmed reduction in the total token supply over time).

The additional feature of claim 7 would be easily derived from the disclosure of D1 (see page 56, right col. lines 44-48: the PoS approach rewards all validators who keep their operations up and running on a consistent and regular basis in the form of interest on their stake).

The additional feature of claim 8 would be easily derived from the disclosure of D1 (see page 63, right col. lines 20-22: the tokens were locked on their respective ledgers and sequentially released to their new owners using smart contract).

The additional feature of claim 16 would be easily derived from the disclosure of D1 (see page 30, right col. lines 43-48; page 31, left col. lines 1-2: DAOs are organizations run according to rules set by transparently coded algorithms, and individuals join the organization by purchasing the governance token issued by the DAO; and a governance token enables anyone with interest to buy into the DAO and help to run the Dapp).

Accordingly, claims 2, 7-8, and 16 would have been obvious to a person skilled in the art over D1 in view of D2, and claims 4-5 would have been obvious to a person skilled in the art over a combination of D1, D2, and D3. Therefore, claims 2, 4-5, 7-8, and 16 lack an inventive step.

1.3. Claims 3, 6, and 9-15

The additional features of claims 3, 6, 9-10, and 15 are not disclosed in any one of the prior art documents, nor are they obvious to a person skilled in the art over the documents taken alone or in combination.

Claims 11-14 are dependent on claim 10.

Therefore, claims 3, 6, and 9-15 are novel and involve an inventive step.

2. Claims 17-24

Claim 17 differs from these prior art documents in the features of the governance token, which must have a finite number; the currency token, which does not have a finite number; the currency token, which will not be issued until the governance token has been traded on crypto markets for a certain time and reaches a certain price per unit; the reward paid to crypto payment gateways through the merchant, which is to cover transaction fees charged whatsoever to the merchant by crypto payment gateways to achieve zero transaction fees for merchants; the rewards to the consumer, the merchant and the crypto payment gateways through the merchant, which the monetary system can adjust for achieving zero inflation and deflation measured by the percentage change of prices of a set of consumption goods and services in the currency token in a given time period; the interest rate, which the monetary system can adjust for achieving zero inflation and deflation; a target exchange rate between the currency token and the US dollar, which can be obtained through calculation under the ceteris paribus condition, because the currency token has a desired annual zero inflation / deflation rate and the US dollar has an actual annual core PCE inflation rate published monthly by the U.S. Bureau of

WRITTEN OPINION OF THE  
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International application No.

PCT/US2025/049220

Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement

Economic Analysis; the currency token's actual inflation and deflation, which can be measured by deviation from the target exchange rate, because the ceteris paribus condition can never be met; a retail merchant, which receives the currency token from the monetary system to cover exchange loss caused by conversion from the token currency to the US dollar; the merchant's exchange loss, which is measured by the difference between the target exchange rate and the actual exchange rate of the merchant's conversation from the currency token to the US dollar; the currency token, which is newly created and sold by the monetary system on crypto markets in exchange for the US dollar stablecoins, when the currency token's price against US dollar is higher than the target exchange rate, and surpasses certain percentage of the target exchange rate at a given time period; the proceeds of US dollar-pegged stablecoins received by the monetary system, which can only be used to buy back the governance token from crypto markets; the governance token, which the monetary system can issue to buy back the currency token, when the currency token's price against US dollar is lower than the target exchange rate, and surpasses certain percentage of the target exchange rate; a first indicator of inflation and deflation, which is the difference between the currency token sold minus the currency token bought at a given time period; a direction to increase CryptoFed's interest rate and reduce the rewards to consumers and merchants, when the first indicator is negative; a direction to reduce CryptoFed's interest rate and increase the rewards to consumers and merchants, when the first indicator is positive; a second indicator of inflation and deflation, which is the difference between the governance token sold minus the governance token bought at a given time period; a direction to increase CryptoFed's interest rate and reduce the rewards to consumers and merchants, when the second indicator is positive; a direction to reduce CryptoFed's interest rate and increase the rewards to consumers and merchants, when the second indicator is negative; and an indicator of crisis of the currency token, which the governance token sold divided by the governance token bought exceeds two in a given time period. And it is not obvious to a person skilled in the art over the documents taken alone or in combination.

Claims 18-24 are dependent on claim 17.

Therefore, claims 17-24 are novel and involve an inventive step.

II. Industrial Applicability (PCT Article 33(4))

Claims 1-24 are industrially applicable.

**Box No. VIII**    **Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

1. Claims 13-14 refer to 'the one or more cryptocurrency markets' of claim 10. However, the term 'one or more cryptocurrency markets' has not been defined in claim 10, but in claim 2. Therefore, claims 13-14 do not meet the requirements of PCT Article 6.
2. Claim 14 refers to 'the repurchased currency tokens' of claim 10. However, the term 'repurchased currency tokens' has not been defined in claim 10, but in claim 5. Therefore, claim 14 does not meet the requirements of PCT Article 6.
3. Claim 15 refers to 'the target exchange rate' of claim 1. However, the term 'a target exchange rate' has not been defined in claim 1, but in claim 10. Therefore, claim 15 does not meet the requirements of PCT Article 6.