## CLAIMS

1. A computer method for administering a commodity material transaction, comprising:

receiving, by a processor, via a first graphical user interface (GUI) from a seller computing device, an ask price for a quantity of a commodity material~~, denominated in a first currency~~; receiving, by the processor, via a second GUI from a buyer computing device, a bid price for the quantity of the commodity material~~, denominated in a second currency~~;

determining, by the processor, that the ask price and the bid price meet a match criterion, wherein the match criterion requires the bid price to be at least equal to or greater than a predetermined threshold amount relative to the ask price;

receiving, by the processor, a first cryptocurrency transaction corresponding to the bid price from a buyer wallet into a transaction wallet;

transmitting, by the processor, a second cryptocurrency transaction corresponding to the ask price from the transaction wallet to a seller wallet;

issuing, by the processor, a distributed ledger token corresponding to the quantity of the commodity material; and

transmitting, by the processor, the distributed ledger token to the buyer wallet.

2. The computer method of claim 1 , wherein the ask price is denominated in a first currency, the first currency comprising~~es~~ at least one of United States dollars or cryptocurrency.

~~3. The computer method of claim 1 , wherein the first currency comprises a cryptocurrency.~~

4~~3~~. The computer method of claim ~~1~~ 2 , wherein the bid price is denominated in a second currency, second currency comprising~~es~~ a different currency than the first currency.

5~~4~~. The computer method of claim 1 , wherein the bid price is denominated in a second currency, the second currency comprising~~es~~ the same currency as the first currency.

~~6. The computer method of claim 1 , wherein the first GUI and the second GUI comprise respective instances of the same GUI.~~

~~7. The computer method of claim 1 , further comprising:~~

~~displaying, via the GUI to at least one of the seller or the buyer, at least one benchmark price for the quantity of the commodity material.~~

~~8. The computer method of claim 1 , further comprising:~~

~~displaying, via the GUI to at least one of the seller or the buyer, at least one estimated price for the quantity of the commodity material.~~

~~9. The computer method of claim 1 , further comprising:~~

~~displaying, via the GUI to at least one of the seller or the buyer, at least one historical price for the quantity of the commodity material.~~

~~10. The computer method of claim 1 , wherein determining that the ask price and the bid price meet a match criterion includes determining that the bid price is greater than or equal to the ask price plus a transaction fee.~~

~~11. The computer method of claim 1 , wherein receiving the first cryptocurrency transaction from the buyer wallet into the transaction wallet comprises receiving a fungible cryptocurrency.~~

~~12. The computer method of claim 1 , wherein receiving the first cryptocurrency transaction comprises receiving a distributed ledger token corresponding to a quantity of a second commodity material different than the commodity material.~~

~~13. The computer method of claim 1 , further comprising:~~

~~displaying a property of the commodity material in the GUI.~~

~~14. The computer method of claim 13, wherein the property includes a commodity grade.~~

~~15. The computer method of claim 1 , further comprising:~~

~~displaying price information about the commodity quantity in the GUI.~~

~~16. The computer method of claim 15, wherein displaying the price information includes displaying a price history for previous quantities of the commodity material.~~

~~17. The computer method of claim 15, wherein displaying the price information includes displaying a modeled price for the commodity material.~~

~~18. The computer method of claim 1 , wherein the quantity of commodity material comprises a particular distinguishable instance of the commodity material.~~

~~19~~5. The computer method of claim 1 , wherein the commodity material comprises an in-ground ore or coal.

~~20. The computer method of claim 19, wherein the quantity comprises a ton.~~

~~21. The computer method of claim 19, wherein the quantity comprises a metric tonne.~~

~~22~~6. The computer method of claim ~~19~~5, wherein the quantity comprises a quantity of refined metal produced from the in-ground ore.

~~23~~7. The computer method of claim 1 , wherein the commodity material is to be produced at a future date.

~~24~~8. The computer method of claim 1 , wherein the commodity material exists in a transportable form at the moment of distributed ledger token issuance.

~~25~~9. The computer method of claim 1 , wherein the commodity material comprises mined ore or coal.

~~26~~10. The computer method of claim 1 , wherein the commodity material comprises natural gas.

~~27. The computer method of claim 26, wherein the commodity material comprises liquefied natural gas.~~

~~28. The computer method of claim 26, wherein the quantity comprises a number of standard cubic feet.~~

~~29. The computer method of claim 26, wherein the quantity comprises a unit of mass.~~

~~30. The computer method of claim 26, wherein the quantity comprises a unit of energy.~~

~~31. The computer method of claim 26, wherein the commodity material comprises a portion of a natural gas deposit.~~

~~32~~11. The computer method of claim 1 , wherein the commodity material comprises an agricultural product.

~~33~~12. The computer method of claim 1 , further comprising:

receiving a second ask price for the distributed ledger token at a later date; wherein the distributed ledger token represents the same distinguishable instance of the commodity material as when the distributed ledger token was issued.

~~34~~13. The computer method of claim 1 , further comprising:

receiving notice that the distinguishable instance of the commodity material is delivered;

receiving payment for the delivered commodity material; and

redeeming the distributed ledger token for a currency corresponding to the received payment.

~~35~~14. The computer method of claim ~~34~~13, wherein the distributed ledger token is burned when redeemed.

~~36~~15. The computer method of claim ~~34~~13, wherein the value of the distributed ledger token is reset to zero when redeemed.

~~37~~16. The computer method of claim 1 , wherein the value of the distributed ledger token is set to equal the current value of the quantity of the commodity material.

~~38~~17. The computer method of claim ~~37~~16, whereby the distributed ledger token is asset-backed by the distinguishable instance of commodity material it is issued to represent.

~~39~~18. A non-transitory computer-readable medium carrying computer instructions to cause a computer to execute a method, comprising:

receiving, via a first graphical user interface (GUI) from a seller, an ask price for a quantity of a commodity material, denominated in a first currency; receiving, via a second GUI from a buyer, a bid price for the quantity of the commodity material, denominated in a second currency;

determining that the ask price and the bid price meet a match criterion; receiving a first cryptocurrency transaction corresponding to the bid price from a buyer wallet into a transaction wallet;

transmitting a second cryptocurrency transaction corresponding to the ask price from the transaction wallet to a seller wallet;

issuing a distributed ledger token corresponding to the quantity of the commodity material; and

transmitting the distributed ledger token to the buyer wallet.

~~40. A computer system, comprising:~~

~~a Webserver configured to output a first GUI to a first device for a seller and to receive an ask price for a quantity of a commodity material, to output a second GUI to a second device for a buyer, and to receive a bid price for the quantity of the commodity material; and~~

~~a server computer, operatively coupled to the Webserver, and configured to determine that the ask price and the bid price meet a match criterion, to authorize first and second cryptocurrency transactions to respectively transfer the ask price to the seller and receive the bid price from the buyer, and to transmit said authorizations to the Webserver.~~

~~41. The computer system of claim 40, further comprising:~~

~~a plurality of devices operatively coupled to the Webserver and carrying the distributed ledger;~~

~~wherein the Webserver is configured to transmit the authorized first and second cryptocurrency transactions to the plurality of devices;~~

~~wherein the plurality of devices are configured to collectively validate the first and second cryptocurrency transactions; and~~

~~wherein the Webserver is configured to receive and forward collective validation to the server computer.~~

~~42. The computer system of claim 40, wherein the server computer is further configured to:~~

~~receive a first cryptocurrency transaction corresponding to the bid price from a buyer wallet to a transaction wallet via the Webserver;~~

~~transmit a second cryptocurrency transaction corresponding to the ask price from the transaction wallet to a seller wallet via the Webserver;~~

~~issue a distributed ledger token corresponding to the quantity of the commodity material; and~~

~~cause the Webserver to transmit the token to the buyer wallet.~~

~~43~~19. A computer method for conveying value associated with a commodity, comprising:

issuing, with a server computer, a distributed ledger token corresponding to a distinguishable instance of a commodity; and

outputting, with a web server for display via a graphical user interface (GUI) on a user device, information corresponding to the distributed ledger token and the distinguishable instance of the commodity, the information including at least one of: a benchmark price for the distinguishable instance of the commodity, an estimated price for the distinguishable instance of the commodity, an historical price for the distinguishable instance of the commodity, a modeled price for the distinguishable instance of the commodity, a currency exchange rate for accepted transaction currencies for the distinguishable instance of the commodity;

wherein the distributed ledger token represents ownership of the distinguishable instance of the commodity.

~~44. The computer method for conveying value associated with a commodity of claim 43, further comprising:~~

~~receiving, via the web server, availability data from a seller device indicating availability of the distinguishable instance of the commodity.~~

~~45. The computer method for conveying value associated with a commodity of claim 44, wherein the availability data is indicative of current availability of the distinguishable instance of the commodity.~~

~~46. The computer method for conveying value associated with a commodity of claim 44, wherein the availability data is indicative of a planned availability of the commodity.~~

~~47. The computer method for conveying value associated with a commodity of claim 44, wherein receiving the availability data comprises receiving the data as an encrypted transaction on the distributed ledger.~~

~~48~~20. The computer method for conveying value associated with a commodity of claim ~~43~~19, wherein issuing the distributed ledger token comprises issuing a public blockchain token.

~~49~~21. The computer method for conveying value associated with a commodity of claim ~~43~~19, wherein issuing the distributed ledger token comprises issuing a permissioned blockchain token.

~~50~~22. The computer method for conveying value associated with a commodity of claim ~~43~~19, wherein issuing the distributed ledger token comprises issuing a private blockchain token.

~~51~~23. The computer method for conveying value associated with a commodity of claim ~~43~~19, wherein issuing the distributed ledger token corresponding to the distinguishable instance of the commodity comprises:

parsing property data related to one or more physical properties of the distinguishable instance of the commodity;

hashing the property data; and

adding the property data onto the distributed ledger as a transaction.

~~52~~24. The computer method for conveying value associated with a commodity of claim ~~51~~ 23 , further comprising: receiving property data from a seller device, the data corresponding to the one or more physical properties.

~~53. The computer method for conveying value associated with a commodity of claim 43, wherein issuing the distributed ledger token corresponding to the distinguishable instance of the commodity comprises:~~

~~parsing property data related to a mass or volume of the distinguishable instance of the commodity;~~

~~hashing the property data; and~~

~~adding the property data onto the distributed ledger as a transaction.~~

~~54. The computer method for conveying value associated with a commodity of claim 53, further comprising:~~

~~receiving property data from a seller device, the data corresponding to the one or more physical properties.~~

~~55~~25. The computer method for conveying value associated with a commodity of claim ~~43~~19, wherein issuing the distributed ledger token corresponding to the distinguishable instance of the commodity comprises:

parsing availability data related to a projected date or time of availability of the distinguishable instance of the commodity;

hashing the availability data; and

adding the availability data onto the distributed ledger as a transaction.

~~56. The computer method for conveying value associated with a commodity of claim 43, wherein issuing the distributed ledger token corresponding to the distinguishable instance of the commodity comprises:~~

~~parsing availability data related to a location of the distinguishable instance of the commodity;~~

~~hashing the availability data; and~~

~~adding the availability data onto the distributed ledger as a transaction.~~

~~57. The computer method for conveying value associated with a commodity of claim 56, further comprising:~~

~~receiving availability data from a seller device, the data corresponding to the one or more physical properties.~~

~~58. The computer method for conveying value associated with a commodity of claim 43, wherein issuing the distributed ledger token corresponding to the distinguishable instance of the commodity comprises:~~

~~parsing availability data related to a position of the distinguishable instance of the commodity in a sequence of distinguishable instances of the commodity;~~

~~hashing the availability data; and~~

~~adding the availability data onto the distributed ledger as a transaction.~~

~~59. The computer method for conveying value associated with a commodity of claim 58, further comprising:~~

~~receiving availability data from a seller device, the data corresponding to the one or more physical properties.~~

~~60~~26. The computer method for conveying value associated with a commodity of claim ~~43~~19, further comprising:

receiving, via the web server, certification data corresponding to a certification of one or more parameters corresponding to the distinguishable instance of the commodity.

~~61. The computer method for conveying value associated with a commodity of claim 60, wherein receiving certification data corresponding to the certification of one or more parameters corresponding to the distinguishable instance of the commodity comprises receiving certification data from the seller.~~

~~62. The computer method for conveying value associated with a commodity of claim 60, wherein receiving certification data corresponding to the certification of one or more parameters corresponding to the distinguishable instance of the commodity comprises receiving data from a third party.~~

~~63. The computer method for conveying value associated with a commodity of claim 60, wherein receiving certification data corresponding to the certification of one or more parameters corresponding to the distinguishable instance of the commodity comprises receiving data from an automated measurement device.~~

~~64. The computer method for conveying value associated with a commodity of claim 60, further comprising adding the certification data corresponding to the certification of one or more parameters corresponding to the distinguishable instance of the commodity onto the distributed ledger token.~~

~~65. The computer method for conveying value associated with a commodity of claim 64, wherein the certification data is added onto the distributed ledger token as metadata.~~

~~66. The computer method for conveying value associated with a commodity of claim 64, wherein the certification data is added onto the distributed ledger token as an encrypted transaction.~~

~~67. The computer method for conveying value associated with a commodity of claim 64, wherein the certification data is added onto the distributed ledger token at the moment of issuance.~~

~~68. The computer method for conveying value associated with a commodity of claim 64, wherein the certification data is added onto the distributed ledger token after issuance of the distributed ledger token.~~

~~69. The computer method for conveying value associated with a commodity of claim 64, wherein establishing at least a first value occurs after adding the certification data onto the distributed ledger token.~~

~~70~~27. The computer method for conveying value associated with a commodity of claim ~~43~~19, further comprising:

transferring ownership of the distributed ledger token from a seller to a buyer;

wherein transferring ownership of the distributed ledger token also transfers ownership of the distinguishable instance of the commodity

corresponding to the distributed ledger token.

~~71~~28. The computer method for conveying value associated with a commodity of claim ~~70~~27, wherein transferring ownership of the distributed ledger token comprises:

establishing, using at least the server computer, a selling valuation and a corresponding buying valuation for the distributed ledger token;

receiving, via the web server, an acceptance of at least one of the selling valuation or the buying valuation;

receiving, via the web server, a cryptocurrency, second distributed ledger token, or cryptocurrency and second distributed ledger token transaction equal to the buying valuation from at least one buyer resource;

transmitting, via the web server, the distributed ledger token to the at least one buyer resource; and

transmitting, via the web server, a cryptocurrency, second distributed ledger token, or cryptocurrency and second distributed ledger token transaction equal to the selling valuation to at least one seller resource.

~~72~~29. A non-transitory computer readable medium carrying computer instructions capable of causing a computer to execute a method comprising: issuing, with a server computer, a distributed ledger token corresponding to a distinguishable instance of a commodity; and

outputting, with a web server for display via a graphical user interface (GUI) on a user device, information corresponding to the distributed ledger token and the distinguishable instance of the commodity;

wherein the distributed ledger token represents ownership of the distinguishable instance of the commodity.

~~73. A computer system for conveying value associated with a commodity, comprising:~~
~~a web server operatively coupled to a first user device via the Internet, the web server being configured to receive commodity availability data from the first user device; and~~
~~at least one server computer operatively coupled to the web server, the server computer being configured to receive the commodity availability data from the web server, and issue a distributed ledger token corresponding to a distinguishable instance of the available commodity;~~
~~wherein the server computer is further configured to credit the distributed ledger token to the first user in return for a smart contract that causes ownership of the distributed ledger token to legally represent ownership of the commodity distinguishable instance; and~~
~~wherein the server computer is configured to cooperate with the web server to transmit at least information related to the distributed ledger token and the commodity distinguishable instance represented thereby, via the Internet, for display in a GUI on the user device.~~
~~74. The computer system for conveying value associated with a commodity of claim 73, wherein the server computer is configured to cooperate with the web server to receive property data related to the commodity distinguishable instance from the seller device, and to publish the property data or pointer thereto onto the distributed ledger token.~~
~~75. The computer system for conveying value associated with a commodity of claim 73, wherein the server computer is configured to cooperate with the web server to receive property data related to the commodity distinguishable instance from a certification agent device, and to publish the property data or a pointer to the property data onto the distributed ledger token.~~
~~76. The computer system for conveying value associated with a commodity of claim 73, wherein the server computer is configured to cooperate with the web server to receive location, production, or movement data related to the~~
~~distinguishable instance of the commodity from a production, transportation, or storage service device, and to publish the data or a pointer to the data onto the distributed ledger token.~~
~~77. The computer system for conveying value associated with a commodity of claim 73, wherein the server computer is configured to cooperate with the web server to receive location, production, property, or proof of existence or delivery data from an automated device, and to publish the data or a pointer to the data onto the distributed ledger token.~~

~~78. The computer system for conveying value associated with a commodity of claim 73, further comprising:~~

~~a plurality of stakeholder devices operatively coupled to the server computer, each stakeholder device holding at least a portion of the distributed ledger;~~

~~wherein issuing the distributed ledger token comprises transmitting data to at least a portion of the stakeholder devices.~~

~~79. The computer system for conveying value associated with a commodity of claim 78, wherein the plurality of stakeholder devices include the seller device and at least one buyer device.~~

~~80. The computer system for conveying value associated with a commodity of claim 78, wherein the server computer is configured to operate as an oracle to add real-world data to the distributed ledger.~~

~~81. The computer system for conveying value associated with a commodity of claim 73, further comprising:~~

~~a buyer device operatively coupled to the web server and the server computer;~~

~~wherein the server computer and a plurality of stakeholder devices are configured to facilitate a swap of the distributed ledger token from a seller resource to a buyer resource.~~

~~82~~30. A computer method for transferring an interest in a commodity, comprising:

receiving, into a server computer from a first user via a graphical user interface (GUI) displayed on a remote user device and a network, a private key and an image of a proof of ownership of a distinguishable instance of a commodity;

generating a smart contract conveying conditional ownership of the distinguishable instance of the commodity;

issuing, with the server computer, a first quantity of electronic tokens on a distributed ledger, the first quantity of electronic tokens carrying the smart contract such that the first quantity of electronic tokens are capable of collectively representing ownership of the distinguishable instance of the commodity;

transferring at least a portion of the first quantity of electronic tokens to a first user electronic wallet corresponding to the first user;

receiving, from the first user via the graphical user interface (GUI) displayed on the remote user device, an offer to sell at least a portion of the first quantity of electronic tokens;

listing at least a portion of the first quantity of electronic tokens on an electronic token exchange; and

transferring at least a portion of the first quantity of electronic tokens from the first user electronic wallet to a buyer wallet using an exchange settlement service disposed on a second server computer.

~~83~~31. The computer method for transferring an interest in a commodity of claim ~~82~~30, further comprising:

encrypting and storing the proof of ownership at a secret location; and hashing data corresponding to the secret location onto the first quantity of electronic tokens using a distributed ledger transaction.

~~84~~32. The computer method for transferring an interest in a commodity of claim ~~82~~30, wherein the secret location comprises a networked storage address.

~~85~~33. The computer method for transferring an interest in a commodity of claim ~~84~~32, wherein the networked storage address is made secret by encrypting the networked storage address before hashing the encrypted storage onto the first quantity of electronic tokens on the distributed ledger.

~~86~~34. The computer method for transferring an interest in a commodity of claim ~~82~~30, wherein the smart contract condition is satisfied by binding transfer of the distinguishable instance of the commodity to the first quantity of electronic tokens and transfer of at least a portion of the first quantity of electronic tokens to the first user electronic wallet.

~~87~~35. The computer method for transferring an interest in a commodity of claim ~~86~~34, wherein the binding transfer of the distinguishable instance of the commodity includes signing the smart contract using the private key.

~~88~~36. The computer method for transferring an interest in a commodity of claim ~~86~~34, further comprising:

transmitting a public key to the electronic token exchange, the public key being configured to enable a buyer to view the proof of ownership without knowing the secret location.

~~89~~37. The computer method for transferring an interest in a commodity of claim ~~82~~30, wherein receiving, from the first user via a remote device, an offer to sell at least a portion of the first quantity of electronic tokens includes establishing an ask price for an electronic token.

~~90~~38. The computer method for transferring an interest in a commodity of claim ~~89~~37, wherein establishing an ask price for the electronic token includes receiving an ask price from the first user via the GUI displayed on the remote user device and the network.

~~91~~39. The computer method for transferring an interest in a commodity of claim ~~82~~30, wherein listing at least a portion of the first quantity of electronic tokens on an electronic token exchange and transferring at least a portion of the first quantity of electronic tokens from the first user wallet to a buyer wallet using an exchange settlement service disposed on a second server computer includes:

receiving a bid price from a buyer via a buyer device and the network; determining that the ask price and the bid price meet a match criterion; transferring the electronic token to a second user wallet corresponding to the second user; and

transferring a settlement price to the first user wallet.

~~92. The computer method for transferring an interest in a commodity of claim 91 , wherein the settlement price is denominated in an electronic currency.~~

40. The method of claim 1, wherein the predetermined threshold amount relative to the ask price is an amount lower than the ask price.