`CoinInfo` JSON Documents

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Overview

This document specifies the format for `CoinInfo` documents.

In Swaptacular, each digital coin contains a link to a debtor info document. The `CoinInfo` document format, specified here, is one of the standard formats that can be used to specify debtor information. Note that in Swaptacular's terminology, the word "debtor" means a Swaptacular currency, with its respective issuer.

Note: The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in RFC 2119.

MIME Type

Over HTTP connections, `CoinInfo` documents MUST be transferred with `application/vnd.swaptacular.coin-info+json` MIME type.

JSON Schema

`CoinInfo` documents are JSON documents whose structure and content can be correctly validated by the JSON Schema specified here:

Type: `object`

path: #

This schema accepts additional properties.

Properties

- `type` required

- Type: `string`
- path: #/properties/type
- The value MUST match this pattern: `^CoinInfo(-v[1-9][0-9]{0,5})?$`

- **revision** `required`

  The revision number. Later revisions SHOULD have bigger revision numbers.

  - Type: `integer`
  - path: #/properties/revision
  - Range: between 0 and 2147483647

- **willNotChangeUntil**

  Optional promise that, until the specified moment, there will be no new revisions of this document.

  - Type: `string`
  - path: #/properties/willNotChangeUntil
  - String format MUST be a "date-time" (ISO 8601 format)
  - Length: <= 100

- **latestDebtorInfo** `required`

  A link to the newest revision of this currency's debtor info document. (Most probably, a link to the newest revision of this document.)

  - path: #/properties/latestDebtorInfo
  - &ref: #/definitions/ShortLink

- **summary**

  A short description of the currency.

  - Type: `string`
  - path: #/properties/summary
  - Length: <= 500

- **debtorIdentity** `required`

  Uniquely identifies the debtor (and the currency). Note that in Swaptacular's terminology, the word "debtor" means a Swaptacular currency with its respective issuer. Therefore, if single issuer (a person or organization) issues multiple currencies, he/she will represent multiple different "debtors".

  - path: #/properties/debtorIdentity
  - &ref: #/definitions/DebtorIdentity

- **debtorName** `required`

  The name of the debtor. SHOULD be unambiguous, easy to remember, and unlikely to be duplicated accidentally. Different currencies SHOULD

have different `debtorName`s, even when they are issued by the same person or organization.

- Type: `string`
- path: #/properties/debtorName
- Length: between 1 and 40

- **debtorHomepage**

  Optional link to the debtor's homepage.

  - path: #/properties/debtorHomepage
  - &ref: #/definitions/ShortLink

- **amountDivisor** `required`

  Before displaying the amount, it should be divided by this number. This value should be used for display purposes only. Notably, the value of this field must be ignored when the exchange rate between pegged currencies is calculated. This field SHOULD NOT change in newer revisions of the document.

  - Type: `number`
  - path: #/properties/amountDivisor
  - Exclusive Range: > 0

- **decimalPlaces** `required`

  The number of digits to show after the decimal point, when displaying the amount. A negative number signifies the number of insignificant digits at the end of the integer number. This field SHOULD NOT change in newer revisions of the document.

  - Type: `integer`
  - path: #/properties/decimalPlaces
  - Range: between -20 and 20

- **unit** `required`

  The value measurement unit. It should be shown right after the displayed amount, "500.00 USD" for example. This field SHOULD NOT change in newer revisions of the document.

  - Type: `string`
  - path: #/properties/unit
  - Length: between 1 and 40

- **peg**

  Optional currency peg. A currency peg is a currency management strategy in which the issuer sets a specific fixed exchange rate between the tokens of his currency (the pegged currency) and the tokens of some other currency (the peg currency).

– path: #/properties/peg
– &ref: #/definitions/Peg

Definitions

ShortLink

Type: `object`

path: #/definitions/ShortLink

This schema does not accept additional properties.

Properties

- **uri** `required`

  The IRI (Internationalized Resource Identifier) of the referenced resource. MUST be an absolute IRI.

  – Type: `string`
  – path: #/definitions/ShortLink/properties/uri
  – String format MUST be a "iri"
  – Length: $<= 200$

DebtorIdentity

Type: `object`

path: #/definitions/DebtorIdentity

This schema accepts additional properties.

Properties

- **type** `required`

  – Type: `string`
  – path: #/definitions/DebtorIdentity/properties/type
  – The value MUST match this pattern: `^DebtorIdentity(-v[1-9][0-9]{0,5})?$`

- **uri** `required`

  The information contained in this field MUST be enough to uniquely and reliably identify the debtor (and the currency). Note that a network request MUST NOT be needed to identify the debtor. For example, if the issuer happens to be a bank, the URI would reveal the type of the issuer (a bank), the ID of the bank, and the currency code (USD for example). Note that some debtors may be used only to represent a physical value measurement unit (like ounces of gold). Those dummy debtors do not represent a person

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or an organization, do not owe anything to anyone, and are used solely as
identifiers of value measurement units.

- Type: `string`
- path: #/definitions/DebtorIdentity/properties/uri
- String format MUST be a "uri"
- Length: <= 100

PegDisplay

Type: `object`

path: #/definitions/PegDisplay

This schema accepts additional properties.

Properties

- **type** `required`

  - Type: `string`
  - path: #/definitions/PegDisplay/properties/type
  - The value MUST match this pattern: `^PegDisplay(-v[1-9][0-9]{0,5})?$`

- **amountDivisor** `required`

  The peg currency's `amountDivisor`.

  - Type: `number`
  - path: #/definitions/PegDisplay/properties/amountDivisor
  - Exclusive Range: > 0

- **decimalPlaces** `required`

  The peg currency's `decimalPlaces`.

  - Type: `integer`
  - path: #/definitions/PegDisplay/properties/decimalPlaces
  - Range: between -20 and 20

- **unit** `required`

  The peg currency's `unit`.

  - Type: `string`
  - path: #/definitions/PegDisplay/properties/unit
  - Length: between 1 and 40

Peg

Type: `object`

path: #/definitions/Peg

This schema accepts additional properties.

Properties

- **type** `required`

  - Type: `string`
  - path: #/definitions/Peg/properties/type
  - The value MUST match this pattern: `^Peg(-v[1-9][0-9]{0,5})?$`

- **exchangeRate** `required`

  The exchange rate between the pegged currency and the peg currency. For example, `2.0` would mean that pegged currency's tokens are twice as valuable as peg currency's tokens.

  - Type: `number`
  - path: #/definitions/Peg/properties/exchangeRate
  - Range: $>= 0$

- **display** `required`

  Specifies peg currency's display parameters.

  - path: #/definitions/Peg/properties/display
  - &ref: #/definitions/PegDisplay

- **debtorIdentity** `required`

  Uniquely identifies the peg currency.

  - path: #/definitions/Peg/properties/debtorIdentity
  - &ref: #/definitions/DebtorIdentity

- **latestDebtorInfo** `required`

  A link to the newest revision of the peg currency's debtor info document (a `CoinInfo` document, for example).

  - path: #/definitions/Peg/properties/latestDebtorInfo
  - &ref: #/definitions/ShortLink

JSON Schema File

This is the JSON Schema file, for validating `CoinInfo` documents:

```
{
  "definitions": {
    "ShortLink": {
      "type": "object",
      "properties": {
        "uri": {
```

```
          "type": "string",
          "format": "iri",
          "maxLength": 200
        }
    },
    "required": [ "uri" ],
    "additionalProperties": false
},
"DebtorIdentity": {
    "type": "object",
    "properties": {
      "type":  {
        "type": "string",
        "pattern": "^DebtorIdentity(-v[1-9][0-9]{0,5})?$"
      },
      "uri": {
        "type": "string",
        "format": "uri",
        "maxLength": 100
      }
    },
    "required": [ "type", "uri" ],
    "additionalProperties": true
},
"PegDisplay": {
    "type": "object",
    "properties": {
      "type":  {
        "type": "string",
        "pattern": "^PegDisplay(-v[1-9][0-9]{0,5})?$"
      },
      "amountDivisor": {
        "type": "number",
        "format": "double",
        "exclusiveMinimum": 0.0
      },
      "decimalPlaces": {
        "type": "integer",
        "format": "int32",
        "minimum": -20,
        "maximum": 20
      },
      "unit": {
        "type": "string",
        "minLength": 1,
        "maxLength": 40
```

```
        }
      },
      "required": [
        "type",
        "amountDivisor",
        "decimalPlaces",
        "unit"
      ],
      "additionalProperties": true
    },
    "Peg": {
      "type": "object",
      "properties": {
        "type":  {
          "type": "string",
          "pattern": "^Peg(-v[1-9][0-9]{0,5})?$"
        },
        "exchangeRate": {
          "type": "number",
          "format": "double",
          "minimum": 0.0
        },
        "display": {
          "$ref": "#/definitions/PegDisplay"
        },
        "debtorIdentity": {
          "$ref": "#/definitions/DebtorIdentity"
        },
        "latestDebtorInfo": {
          "$ref": "#/definitions/ShortLink"
        }
      },
      "required": [
        "type",
        "exchangeRate",
        "display",
        "debtorIdentity",
        "latestDebtorInfo",
      ],
      "additionalProperties": true
    }
  },
  "type": "object",
  "properties": {
    "type":  {
      "type": "string",
```

```
        "pattern": "^CoinInfo(-v[1-9][0-9]{0,5})?$"
      },
      "revision": {
        "type": "integer",
        "format": "int32",
        "minimum": 0,
        "maximum": 2147483647
      },
      "willNotChangeUntil": {
        "type": "string",
        "format": "date-time",
        "maxLength": 100
      },
      "latestDebtorInfo": {
        "$ref": "#/definitions/ShortLink"
      },
      "summary": {
        "type": "string",
        "maxLength": 500
      },
      "debtorIdentity": {
        "$ref": "#/definitions/DebtorIdentity"
      },
      "debtorName": {
        "type": "string",
        "minLength": 1,
        "maxLength": 40
      },
      "debtorHomepage": {
        "$ref": "#/definitions/ShortLink"
      },
      "amountDivisor": {
        "type": "number",
        "format": "double",
        "exclusiveMinimum": 0.0
      },
    },
      "decimalPlaces": {
        "type": "integer",
        "format": "int32",
        "minimum": -20,
        "maximum": 20
      },
      "unit": {
        "type": "string",
        "minLength": 1,
        "maxLength": 40
```

```
    },
    "peg":  {
      "$ref": "#/definitions/Peg"
    }
  },
  "required": [
    "type",
    "revision",
    "latestDebtorInfo",
    "debtorIdentity",
    "debtorName",
    "amountDivisor",
    "decimalPlaces",
    "unit"
  ],
  "additionalProperties": true
}
```