ico 合约技术方案

V1.0.1

修订历史

版本&日期	修订内容
V1.0.1：2020-02-22	

1. 引言

1.1. 目的

本文为主要描述ico合约的需求、合约接口以及实现方案。

本文档的阅读对象包括项目设计、开发与测试人员、平台维护与运营人员，以及第三方开发者。

1.2. 定义、简写和缩略语

- 无

1.3. 参考资料

- 无

2. 需求说明

- 无

3. 合约设计

3.1. 合约方法设计

3.1.1. StartRound

方法原型

```
func StartRound(round string)
```

调用结构

```
transaction = {
    "note": "ico startRound",
    "gasLimit": "25000",
    "calls": [
    {
        "contract": "bcbtJ4zVVdGeVNNhBNYRNzoYAvDyyZdtwcDXS",
        "method": "Transfer(types.Address,bn.Number)",
        "params": ["bcbtASRVRCir9W9iCGa6Bh7Eg9o9CzNYD4nj4",
"10000000000000"]
    },
    {
        "contract": "bcbtBAVVC4Q158Vgci6TeKeht9hVTBYXsc5ah",
        "method": "StartRound(string)",
        "params": ["{\"fundingGoal\":10000000000000,\"startDate\":\"2020-
02-        02\",\"endDate\":\"2020-02-
21\",\"exchangeRate\":100000000,\"soft\":100000000000,\"hard\":100000000000
0,\"funAmount\":0}"]
    }]
};
```

功能说明

- 启动ico，设置ico参数

3.1.2. Exchange

方法原型

```
func Exchange()
```

调用结构

```
transaction = {
    "note": "ico Exchange",
    "gasLimit": "25000",
    "calls": [
    {
        "contract": "bcbt3ScZC4SzPKEHZDYHe7Xsydu6PKoCxzV8g",
        "method": "Transfer(types.Address,bn.Number)",
        "params": ["bcbtASRVRCir9W9iCGa6Bh7Eg9o9CzNYD4nj4", "1000000000"]
    },
    {
        "contract": "bcbtLPy7Bu1mWUhYs6DWHsgojTt5F5MauhVag",
        "method": "Exchange()",
        "params": [],
    }]
};
```

功能说明

- 参数ico，转入bcbt，等ico结束得到demo币，按照设置1个bcbt兑换10个demobi。

3.1.3. Withdraw

方法原型

```
func Withdraw()
```

调用结构

```
transaction = {
    "note": "ico Withdraw",
    "gasLimit": "25000",
    "calls": [
    {
        "contract": "bcbtLPy7Bu1mWUhYs6DWHsgojTt5F5MauhVag",
        "method": "Withdraw()",
        "params": [],
    }]
};
```

功能说明

- ico结束提取demo币或者owner提取bcbt

3.1.4. CheckGoadReached

方法原型

```
func CheckGoadReached()
```

调用结构

```
transaction = {
    "note": "ico CheckGoadReached",
    "gasLimit": "25000",
    "calls": [
    {
        "contract": "bcbtLPy7Bu1mWUhYs6DWHsgojTt5F5MauhVag",
        "method": "CheckGoadReached()",
        "params": [],
    }]
};
```

功能说明

- 检查ico是否完成

3.1.5 查询ICO进度

查询链接

```
https://test-earth.bcbchain.io/abci_query?
path="/org9ib7PkkqhjV1A3hMXVgPcoBoxkL3iKdnS/ico/round"
```

返回结果

```
{"fundingGoal":250000000,"startDate":"2020-02-29 15:30:30","endDate":"2020-02-29
16:30:30","exchangeRate":100000000,"soft":10000000000,"hard":100000000000,"funAmount":0,"token":"xxxxxx","status":"0"}
```

3.1.6 查询购买记录

方法原型

```
https://test-earth.bcbchain.io/abci_query?
path="/org9ib7PkkqhjV1A3hMXVgPcoBoxkL3iKdnS/ico/records/<address>"
```

> `<address>` 需要用实际的账户地址替换

返回结果

```
[
    {time": "2020-02-29 15:00:00", "address": "xxxxx", "spend": 1000000,
"funAmount": 250000000},
    {time": "2020-02-29 15:10:00", "address": "xxxxx", "spend": 1000000,
"funAmount": 250000000}
]
```

返回结果

[
    {time": "2020-02-29 15:00:00", "address": "xxxxx", "spend": 1000000,
"funAmount": 250000000},
    {time": "2020-02-29 15:10:00", "address": "xxxxx", "spend": 1000000,
"funAmount": 250000000}
]