

SecurityToken(ERC1400) Incarnation

Newly Introduced functions

1. `isIssuable()` - This function is used to know whether the token is mintable or not. If a token returns FALSE for `isIssuable()` then it MUST never allow additional tokens to be issued.
2. `canTransfer()` - This function will be used to understand the cause of failure by getting the byte value. Which will be the ESC that follows the EIP 1066. ESC can be mapped with a reason string to understand the failure cause, table of Ethereum status code will always reside off-chain.

Return values -

- a. `bool` It signifies whether the transaction will be executed or not.
 - b. `byte` Ethereum status code (ESC)
 - c. `bytes32` Application specific reason code.
3. Similarly `canTransferFrom()` will be used.
 4. `setDocument()` - Used to attach a new document to the contract, or update the URI or hash of an existing attached document (Only called by the owner).
 5. `removeDocument()` - Used to remove an existing document from the contract by giving the name of the document.
 6. `isControllable()` - In order to provide transparency over whether `controllerTransfer()` / `controllerRedeem()` are useable or not `isControllable()` function will be used.
 7. `getDocument()` - Used to return the details of a document with a known name (`'bytes32'`).
 8. `getAllDocuments()` - Used to retrieve a full list of documents attached to the smart contract.
 9. `balanceOfByPartition()` - It is used to retrieve the balance of token holder according to the given partition. Initially we only introduced two partitions `LOCKED` & `UNLOCKED`. It will work by looping every TMs to get the balance by using `getTokensByPartition()` which is present in the `ITransferManager`.

Function name changes

1. `freezeMinting()` → `freezeIssuance()`.

2. `mintWithData(address _investor, uint256 _value, bytes memory _data)`
→ `issue(address _tokenHolder, uint256 _value, bytes memory _data)`. `issue` function works similar as the earlier one but it doesn't return a boolean anymore (No return statement).

3. `mintMulti()` → `issueMulti()`.

4. `burnWithData()` → `redeem()`.

5. `burnFromWithData()` → `redeemFrom()`.

6. `forceTransfer()` → `controllerTransfer()` where parameter `_log` is renamed with the `_operatorData` parameter.

7. `forceBurn()` → `controllerRedeem()` where parameter `_log` is renamed with the `_operatorData` parameter.

Removed functions

1. `mint()` It is removed and now everywhere `issue()` function will be used.
2. public version of `verifyTransfer()` is removed. `canTransfer()` & `canTransferFrom()` will be used instead.

Changed Events

1. `Minted(address indexed _to, uint256 _value)` → `Issued(address indexed _operator, address indexed _to, uint256 _value, bytes _data)`.

2. `Burnt(address indexed _from, uint256 _value)` → `Redeemed(address indexed _operator, address indexed _from, uint256 _value, bytes _data)`.

3. `ForceTransfer` → `ControllerTransfer`

4. `ForceBurn` → `ControllerRedemption`

Note - add `STGetter` contract address in the `securityToken` constructor as delegate. This change is not related to ERC's while it is in the favour of contract size issue.