

Title 27 of the Code of Federal Regulations - alcohol, tobacco products and firearms

The Alcohol and Tobacco Tax and Trade Bureau, Department of the Treasury (TTB) regulates and collects taxes on the manufacture, sale and trade of alcohol, tobacco products and firearms within the United States as defined in Title 27.

The National Revenue Center of the TTB issues new Permits for manufacturing units, reconciles reports and claims among other activities. Another division of the TTB, the Risk Management division maintains programs for protecting the public and co-ordinates with the Civic Authority- normally the local Civil Court- to ensure that any new unit granted a Permit is not deemed a disturbance to the public.

Prototype

This prototype deals with the issuance of new Permits to entrepreneurs who would like to setup a brewery, winery or unit to manufacture distilled spirits as per “Title 27, Chapter 1, Subchapter A” of the Electronic Code of Federal Regulations. There are several pre-requisites and steps that ensue when an application for a new Permit is received.

- The National Revenue Center of the TTB verifies the paperwork and preconditions for the issuance of a new Permit.
- Simultaneously the application is made public for a given period during which members of the public can object and appeal to the Civic Authority against the issuance of the new Permit.
- If there are no Appeals or if all Appeals have been disposed of, then the Risk Management division of the TTB clears the issuance of the permit.

Why Blockchain/Distributed Ledger

This application is well-suited for the Distributed Ledger framework for the following reasons:

- **The system is distributed.** All the processes involved- application for permits, dealing with Appeals- are handled at the State level, across all States of the United States.
- **Part of the data needs to be public.** In order to facilitate filing of Appeals, members of the public should be able to view some information relating to Permit applications.

Complexity

A TTB regulator from the National Revenue Center deals with the issuance of Permits. An official from the Risk management division co-ordinates closely with the Civic Authority to ensure that there are no outstanding Appeals. This process is manual- there is a chance of oversight and a Permit could mistakenly be granted even when there are Appeals outstanding. If we allow the inclusion of the Appeals information into the Distributed Ledger (these are visible to all anyway), **we could use the ‘smart contract’ feature of the Distributed ledger to avoid such mistakes.**

In the current system, after paperwork examination and premise inspections have successfully passed, the Application for a new enterprise is moved to the “Acceptable” state. Once the Civic Authority clears

it manually outside of this system, the Application could be moved to the “Granted” state, after which a Permit is issued.

To avoid any oversight, this could be written as a smart contract:

1. On UpdateStatusChange transaction of an Application from ‘Acceptable’ to ‘Granted’,
If the Application is in the “Acceptable” state and all the appeals dealing with this Application (if there are any) are in the “Disposed” state, then move the Application to the “Granted” state, else move it to “Pending Appeals” state.
2. On UpdateStatusChange transaction of an Appeal from “Pending” to “Disposed”,
If all the Appeals of the Application pertaining to this Application are in the “Disposed” state and the Application is in the ‘Pending Appeals’ state, then move it to ‘Granted’ state and send a message to the TTB regulator.

This not only checks and deals with the pending Appeals within the system, but also automatically grants the Permit if needed, without any manual intervention.

Future Developments

Another job of the National Revenue Center of the TTB is to reconcile the Excise Tax returns filed by the Permit holders with the taxes paid, in co-ordination with the Tax and Audit department of the TTB. The estimated time taken for this collection is 0.75 hour per respondent (permit holder) or record keeper according to TTB. (as mentioned in Form f500024-exciseTaxReturn on the TTB web site). This time could be reduced by automating this reconciliation and coordination aspects between the two departments.