

Real Time Tax Compliance

Section 1: Summary

Use Case Summary			
Use Case ID:	GOV-004	Use Case Type:	Vertical
Submission Date:	March 28, 2019	Is Use Case supporting SDGs	Yes
Use Case Title:	Real Time Tax Compliance	Domain:	Government and Public Sector: Taxes
Status of Case	Proof of Concept Demo	Sub-Domain	N/A
Contact information of person submitting/managing the use-case	Priyanka Desai, VP of Business Development & Operations Anne T Griffin, Lead Product Manager Kirsten Albers-Fiedler, Law Associate & Legal Engineer E-mail addresses: priyanka.desai@consensys.net , anne.griffin@consensys.net , kirsten.albersfiedler@consensys.net Telephone number: Social media: https://twitter.com/OpenLawOfficial Web site: https://openlaw.io/		
Proposing Organization	OpenLaw (ConsenSys) - United States of America		
Short Description	<i>The premier open source protocol to rapidly build commercial relationships on blockchain technology.</i>		
Long description	The premier open source protocol to rapidly build commercial relationships on blockchain technology. OpenLaw makes it easy to automate agreements, collect secure e-signatures storing them on the blockchain, turn legal agreements into simple forms, tokenize assets, and execute, trigger, and halt smart contracts. Additionally, OpenLaw has free open source legal agreement library, that gives people around the world easier access to justice and the law for resources that can cost thousands of dollars elsewhere. This technology supports individuals, corporations, and governments in building powerful but simple solutions to complex problems. OpenLaw supports, but is not limited to, use cases such as automatic tax collection and alternative dispute resolution that help communities by making sure public services can be paid for and access to justice.		
SDG in Focus (when applicable)	16 Peace, Justice, and Strong Institutions		
Value Transfer:	Automatic transfer of monetary instruments to the government(s) to which they are owed	Number of Users:	Number of employees + Number of companies + Government Tax Agency

Types of Users:	Individual employees, corporations, government tax collection agencies
Stakeholders	Government tax collection agencies, employers
Data:	<p>Data saved to distributed ledger: Employee First Name, Employee Last Name, Employee Ethereum Address, Salary in Wei per Minute, Amount of Income Tax Withheld in Wei per Minute, Medicare Tax Threshold Amount in Wei, Medicare Tax below Threshold Amount in Wei per Minute, Medicare Tax above Threshold Amount in Wei per Minute, Social Security Tax Base Limit in Wei, Social Security Tax in Wei per Minute, Additional Withholding Amount in Wei per Minute, FUTA Tax Cap Amount in Wei, FUTA Tax in Wei per Minute</p> <p>Our system would interact with any HR systems of the employer, the employee's wallet, the government's wallet, and any government systems that track the payment of taxes.</p>
Identification:	Individual paying taxes is identified in the agreement, however, their signature is hashed to keep their information private from those who are not intended to see the agreement.
Predicted Outcomes:	Will decrease the amount of infrastructure needed to support the payment of taxes, reduce costs of maintaining systems to pay taxes, and reduce tax evasion since these calculations are happening directly in a smart contract.

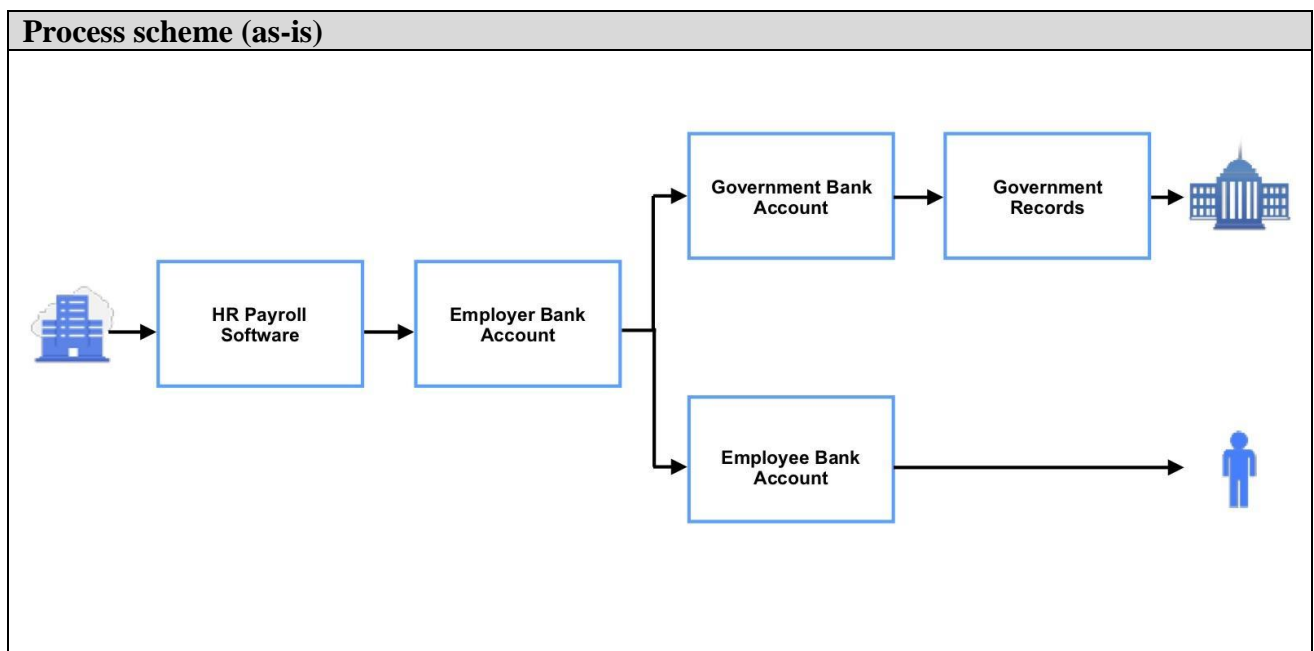
Overview of the Business Problem or Opportunity
Across the world, there are issues with tax evasion or those who would pay taxes but the lack of infrastructure creates barriers to payment. With OpenLaw's blockchain-based protocol, we're creating a more efficient future, where an employer can pay an employee in ether every minute, eliminating the costs of payroll processors or the need for other centralized intermediaries in the process, while at the same time decreasing the tax gap and the needless waste of resources associated with tax compliance.
Why Distributed Ledger Technology?
Using smart contracts on the blockchain allows the process to be more direct and more efficient. It also decreases the number of intermediaries, and the tax gap.

Section 2: Current process

Current Solutions
<i>Existing solutions usually involve several systems within HR software within different companies and several systems within a tax collection agency within the government.</i>

Existing Flow (as-is)		
Step	User Actions	System Actions
1.	Employer creates agreements and forms for employee to provide information about self and bank account	Generation of employment agreement.

2.	Employee and employer sign the agreement	Agreement saved to database via agreement software.
3.	Employer enters the information into HR payroll system and sends applicable paperwork to the government	HR payroll system saves employee information.
4.	Company triggers payment process automatically every two weeks	Payroll system looks up employee information.
5.	Automated	Payroll system determines the amount owed to the employee and amount owed in taxes.
6.	Automated	Employer bank account triggers payment to employee bank account.
7.	Automated	Employee bank processes payment.
8.	Automated	Employer bank account triggers payment to government with information.
9.	Automated	Employer bank account processes payment.



Data and information (as-is)		
Data	Type	Description
1.	Employee information	Name, bank account information, income.
2.	Taxes	Types of taxes owed, quantity of taxes owed.

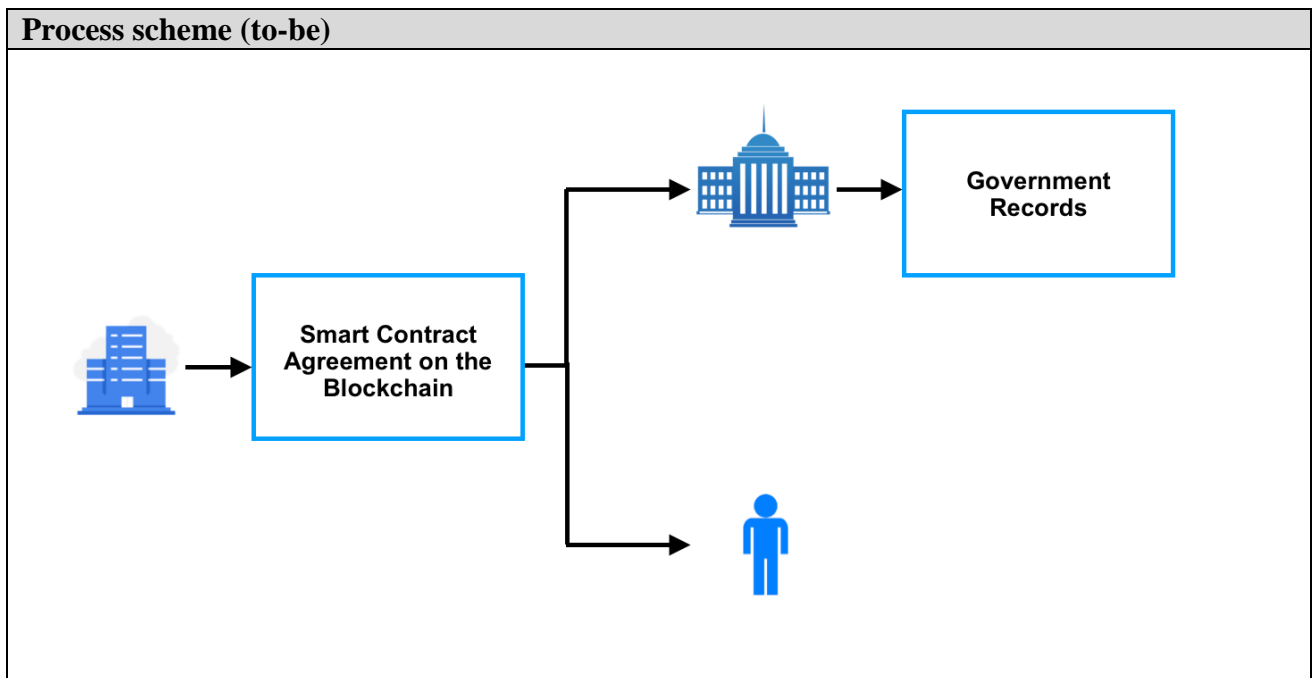
3.	Record of payment to employee, and government tax agency	Records that show the employee was paid and the government tax agency was paid.
4.	Government Tax Agency information	Bank account information for payment.

Participants and their roles (as-is)		
Actor	Type/Role	Description
1.	Employee	Individual employed who needs to have taxes paid to the government.
2.	Employer	Employer who pays the employee and responsible for withholding taxes from the employee's paycheck
3.	Government Tax Collection Agency	Government entity responsible for receiving tax payments and keeping tax records for employees and employers.
4.	Bank	Responsible for sending and receiving payments on behalf of the employee, employer, and government.

Other Notes
<i>Any assumptions, issues</i>

Section 3: Expected process

Expected Flow (to-be)		
Step	User Actions	System Actions
1.	Employer generates employment agreement	Employment agreement is generated as a smart contract
2.	Employee and employer sign agreement	System saves signature and start date to the blockchain
3.	Automated	Payment automatically paid to the employee's wallet for the agreed upon amount and start date via the smart contract
4.	Automated	Payment automatically paid to the government tax collection agency's wallet based on the taxes owed



Participants and their roles		
Actor	Type/Role	Description
1.	Employee	Individual employed who needs to have taxes paid to the government.
2.	Employer	Employer who pays the employee and responsible for withholding taxes from the employee's paycheck
3.	Government Tax Collection Agency	Government entity responsible for receiving tax payments and keeping tax records for employees and employers.

Data and information

Data	Type	Description
1.	Employee information	Name, ethereum address, income.
2.	Taxes	Types of taxes owed, quantity of taxes owed.
3.	Record of payment to employee, and government tax agency	Records that show the employee was paid and the government tax agency was paid.
4.	Government Tax Agency information	Government Ethereum address.

Security and privacy

All information on the Ethereum blockchain is stored as a cryptographic hash on a distributed public ledger.

Main Success Scenario + expected timeline

Ideally, many businesses will begin using this technology with their employees and respective governments. Those businesses and governments will see a cost reduction in the systems needed to maintain the old way of handling payments and taxes, and employees and tax collection agencies can be paid in real time as value is being contributed to the economy, instead of on a schedule that only aligns with intermediary institutions. It should take most businesses less than a year to implement these solutions. For small businesses with less legacy technology, it could take less than six months to implement.

Conditions (pre- or post-)

1. Access to the Internet
2. Access to the Ethereum online wallet.

Performance needs

N/A

Legal considerations

In the United States, there aren't laws explicitly banning cryptocurrency or their use for payment, however not all local governments have explicitly stated they accept them.

Outside of the United States, some countries have banned cryptocurrencies such as Bolivia, or allow cryptocurrency, but do not treat them as a currency. Influence of policy could help governments around the world accept cryptocurrencies so they can use blockchain technology in combination with payments in cryptocurrency or conversion from cryptocurrency to fiat currency. In addition to policy changes, [stablecoins](#) can help mitigate concerns around cryptocurrency. They can be tied to fiat currencies, which lowers their volatility, and can tie their value to the fiat currencies of the respective countries that are interested in implementing this solution.

https://en.wikipedia.org/wiki/Legality_of_bitcoin_by_country_or_territory

Risks

<p>Current laws do not include withholding amounts for cryptocurrencies, and the conversion rate of ether into USD is subject to volatility, we have converted the salary that an employee receives in ether into USD based off the conversation rate as of May 21, 2018 in order to make the appropriate tax calculations. We then converted the tax and adjusted salary amounts back to ether using the same conversion rate. Depending upon how laws shape themselves around cryptocurrencies in the future, the conversion of ether to USD may require the use of an oracle or, possibly, stable coins.</p>

<p>Also risks regarding security of smart contracts so they aren't hacked and money is sent to the incorrect address.</p>

Special Requirements

<p><i>Access to the Ethereum</i></p>

External References and Miscellaneous
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<p>State of Ohio Allowing Payment of Taxes in Crypto - http://ohiocrypto.com/</p>
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<p>Arizona Senate Bill Allowing Crypto Payment - https://legiscan.com/AZ/bill/SB1091/2018</p>
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<p>Illinois House Bill Allowing Crypto Payment - https://legiscan.com/IL/bill/HB5335/2017</p>
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<p>Georgia State Senate Bill Allowing Crypto Payment - https://legiscan.com/GA/bill/SB464/2017</p>
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Other Notes

<p>N/A</p>
