Questions / challenges:

1. Do we need to do basic ‘KYC’ and link tokens to real person name, address, tax number?

*For ICOs/crowdfunding - YES, per Bank Secrecy Act as enforced by SEC and FinCEN*

info [required](https://www.gpo.gov/fdsys/pkg/FR-2016-05-11/pdf/2016-10567.pdf) for compliance not specified in FinCEN rules

note: you must get info on beneficial owner, not just legal owner

use FINRA as model? - haha FINRA rule is tautological

--> try minimum id information but swath in lots of good intention language in all public and private communications

2. For token transferability, is it possible in legal prose to refer to “token bearer” generally, not specific physical person/entity?

*For tokens on centralized or semi-decentralized exchange - probably not, because FinCEN* claims [crypto exchanges are MSBs](https://www.fincen.gov/sites/default/files/shared/FIN-2014-R011.pdf) (must file SARs and Currency Transaction Reports)

3. Can we use existing solutions connecting Ethereum smart contracts and legal prose?

Look at private supply chain projects

OpenLaw - smart contracts - “model all or parts of legal agreements using code”

Chainlink - links only to already-digitized assets

NFT token licensing, like Cryptokitties - for digital assets

\*Astero smart legal agreement

- store hash or checksum of traditional contract in smart contract

- traditional contract held where?

- KYC compliance - reference self-sovereign identity token (ex: Civic, Sovrin)

or authorization tokens (ex: SelfKey) for accredited investors

- compliance for secondary trades (1-year lockup for Rule 506c securities)

- reference other projects (ex: Harbor?)

Provide model contract/licensing agreement with national government?

giving exclusive right to explore/mine the discovered resources in exchange for royalties, taxes, and other obligations--unless government already has law governing mineral rights in space, then wow

Taras’s smart legal agreement

- link offline dumb contract for real-world proceeds with digital smart contract to distribute

- enforce operator to transfer of mined materials to agent nominated by tokenholders, or to sell

at market price and distribute proceeds to agent

(commodities can be identified/verified through sensors, IOT, scanners, system feeds,

by community, consortium, [DAO](https://en.wikipedia.org/wiki/Decentralized_autonomous_organization) etc)

- physical assets are regulated by the jurisdiction you’re in - smart contract depends on

dumb contract enforcement by jurisdiction the defendant is in

Options we considered for contract for proceeds distribution

property ownership

- not real property - companies only own minerals *after* they are extracted

- personal property - commodities are fungible so it’s an agreement for a measure of the

commodity itself or the $ proceeds

joint venture - structurally ok for profit/loss sharing - but may be issue of control over the venture

[CA](https://law.justia.com/cases/california/supreme-court/3d/54/868.html) law: “It is not sufficient that the parties have certain plans in common, but the community of interest must be such that [each] is entitled to be heard in the control [of the enterprise].” See JV scenario: https://www.metalbulletin.com/Article/3814426/Gcamines-to-restructure-mining-contracts-with-JV-partners-chairman.html

futures contract (CFTC-regulated) - think it has to be for certain amount of the commodity

[need research - regular contracts do not need to be for certain amount]

standardized, tradeable agreement to buy or deliver for sale a commodity...

equity ownership share

used by startup teams that are legal entities (corporations can have tradeable ownership shares) or DAOs - tokenholders are shareholders, tokenholders vote on what to do with them or sell the ore and pay out dividends etc

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Regulatory background

*Asteroid Law:*

[UN Outer Space Treaty](http://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/outerspacetreaty.html) - [signed by US](https://www.state.gov/t/isn/5181.htm) well shut my mouth

- nations/companies cannot claim/own territory in space

US Commercial Space Launch Competitiveness Act (eff 2015) -

- US-based companies own the minerals they have extracted [how affect foreign corporations?]

- no regulation of space companies like [Blue Origin](https://www.engadget.com/2015/11/24/blue-origin-reusable-rocket-landing/), SpaceX until 2023

Luxembourg Asteroid Mining Law (eff 8/1/2018) -

- Luxembourg-registered companies own the minerals they have extracted

- creates system for govt to authorize and supervise resource extraction in space

*U.S. Regulation relating to ICOs:*

*Legal Practitioners: Alice Townes (Townes Law), Sarah Hody (Perkins Coie)*

*Compliance considerations for ETHSF asteroid mining project:*

Crowdfunding

- must register with SEC as a funding portal (or use registered broker-dealer)

Verifying minerals extracted

- as securities administrator [need research], must register with SEC regardless of ICO

Selling minerals extracted

- if sold as futures/swaps - must file reports with CFTC

Distributing funds

- as money transmitter, must get licensed in all states where doing business

- as MSB, subject to FinCEN criminal enforcement of securities laws

- FBI can also assist with securities law violation enforcement

Trust policies

- advise users of income tax implications

- advise users of severance tax implications

*Token sales/Crowdfunding rules: [under construction]*

*SEC Reg D, Rule 50*6 - accredited investors, $50K minimum  
*SEC Reg D Rule 506(c)*  - accredited investors, allows general solicitation  
*SEC Reg S* - includes protection for overseas investors   
*SEC Reg A+*  - crowdfunding from the general public, requires prior SEC registration/review

*Agency jurisdiction:*

IRS Internal Revenue Service - tokens are property

capital gains on user transactions, mining

SEC Securities & Exchange Commission - ICOtokens are securities

enforces Securities Acts, FCPA, Bank Secrecy Act (KYC/AML) - civil penalties

exchanges, investment advisers, and administrators must register with SEC

CFTC Commodity Futures Trading Commission - tokens can be commodities

regulates futures, swaps, commodity futures-linked securities

certain persons must file ownership and control reports

FinCEN Financial Crimes Enforcement Network - tokens are money

regulates fin. institutions, money services businesses(MSBs) - crypto exchanges are MSBs

helps enforce BSA provisions of Securities Act - criminal penalties (=go to jail)

OFAC Office of Foreign Assets Control - trade sanctions and asset freezing

considering requiring financial institutions to screen individuals’ virtual currency addresses

State law - most states require licensing of money transmitters

*General considerations*:

For a very young business, the assurance of a conservative compliance approach should be balanced with the time- and money-sucking compliance costs that could sink the business. (See [one founder’s experience,](https://www.facebook.com/thehackfund/videos/329032840922596/) at 49:23-50:47.) One option is to follow financial industry best practices while very small, and then stay close to regulators as you grow.

Possible ways to lower the risk of regulator attention early on:

- use language that conforms to the regulatory regime you want

- publicize internal trust policies to establish a reputation for integrity

- make communications about what you do and who you serve bland and generic, describing services

in factual terms that avoid loaded words.

also consider when liability insurance makes sense, and probably publish an age recommendation.

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Taras:

(connect ERC20 and correct type of legal prose, research and choose correct type of legal prose)

- need understanding of what type of legal structure (any jurisdiction that fits us - US law / Luxembourg law) we're going to use to ensure and enforce the distribution of mission proceeds proportionate to initial “shareholding” in the mission fixated by way of ERC20 tokens distributed in proportion to individuals’ investments.

Mission proceeds - all funds and revenues obtained as result of the mission such as proceeds of sales of mined ore or other materials obtained, space property (asteroid “land”) rights acquired as result of the mission, sponsorship and advertisement revenues etc.

Possible options:

1) Legal (joint venture / property ownership?) contract. Stakeholders (researchers, investors, mission operator) enter into legal contract whose main purpose is to enforce the operator who signed up for the mission (for example SpaceX) to transfer the mined materials to agent nominated by stakeholders or sell at market price at commodities market, all proceeds to be distributed according to stakeholder ownership rights in proportions according to mission ERC20 tokens stakeholder owns. What is type/ template for this contract?

2) Some ‘futures’ or security contract - stakeholders get issued with some security paper stating how much % of proceeds they receive.

3) Automatic formation of legal entity (limited company / DAO) that from day one owns the mission and its assets, and all stakeholders are shareholders in that legal entity / DAO. Then automatically all assets acquired become ownership of that DAO and its stakeholders vote on what to do with them (our could have contracts that enforce to sell the ore and pay out dividends etc).

Questions / challenges:

1. How much information do we need about funders / beneficiaries / signatories to the contract?

In Ethereum technically to own ERC20 tokens you only need to have a public key + private key

Do we need to do basic ‘KYC’ and link this to real person name, address, tax number?

2. It will be better if ERC20 tokens are freely transferable and mission success tokens can be transferred by owners if they need liquidity before mission is over.

Is it possible in legal prose to refer to “token bearer” generally, not specific physical person / entity?

3. Can we use existing solutions connecting Ethereum smart contracts / tokens and legal prose? Need to check out Chainlink, they did something similar with OpenLaw.