



The Honorable Chairperson

Wyoming Select Committee on Blockchain, Financial Technology and Digital Innovation Technology
23rd January 2022

Re: Priority #: 3 Decentralized Autonomous Organizations

LexDAO is a multi-jurisdictional non-profit association¹ of legal engineers building tools and practices at the intersection of web3 and traditional legal systems. We appreciate that Wyoming recognizes the potential of blockchain technology and has put real effort into legislation to enable creators, entrepreneurs, and communities to leverage that technology. We also welcome the opportunity to give our feedback and suggestions to the Wyoming DAO Supplement, and make comments on the latest round of proposed amendments².

LexDAO counts many of the small but growing number of DAO lawyers among its members. So, we also want to use this submission to briefly share our experience and help the Select Committee build the best enabling legislation possible.

DAO builders and practitioners believe in the power of trustless coordination by smart contract. So, any DAO looking to incorporate in the U.S. without a specific geographic tie is seeking maximum flexibility and minimum administrative burden. We believe the current state of the art for U.S. for-profit DAOs is using traditional LLCs (and not the Wyoming DAO law) to “legally wrap” DAOs or portions of DAOs because many states’ LLC laws—Wyoming included—have limited liability, well-known compliance standards, and are respectful of freedom of contract. In order to replace standard LLC laws, we think that the DAO LLC law should be enabling legislation—it should take into account special characteristics of DAOs and be more flexible for DAOs than the traditional LLC law, but respectful of public policy.

MetaCartel, whose legal work was spearheaded by Gabe Shapiro, is a good, if not new, example of a DAO with a Delaware LLC wrapper. MetaCartel’s “Grimoire” (operating agreement³) provides for deference of governance to that DAO’s smart contracts and does not require the provision of any additional information beyond that provided to the Delaware Secretary of State for a standard LLC. Although Delaware or Wyoming’s standard LLC laws do not provide any additional incentive for DAOs, they do not require legally wrapped DAOs to furnish any additional information.

Our experience in this space, as a non-profit DAO engineering other for/non-profit DAOs, motivates our submission. We want to advance the state of practice by assisting the Select Committee in turning the DAO LLC legislation into the preferred option for DAO builders, lawyers, and practitioners. With that background in mind, please consider amendments below to the Wyoming DAO Supplement.

1 LexDAO Guild of Legal Engineers <https://www.lexdao.coop>,  [lex_DAO](https://twitter.com/lex_DAO)  <https://discord.gg/lexdao>

2 Wyoming Select Committee (2022) 22LSO-0063 v0.7 Decentralized autonomous organizations-amendments [[link](#)]

3 MetaCartel Ventures (2020) Grimoire and Operating Agreement, All Exhibits [[link](#)]

Proposed Ammendment

17-31-101(a) (viii) "Presumptive Provision" means smart contracts that *substitute* for provisions in W.S. 17-29 for Wyoming Limited Liability Company Act.

17-31-103 Application of Wyoming Limited Liability Company Act.

(d) A Presumptive Provision under this chapter shall replace the substituted provision so long as the smart contract:

(i) provides the same required information, if any, as the substituted provision;

(ii) is certified by registration agent as performing the same function or fulfilling the same intent as the substituted provision;

(iii) does not infringe any powers under W. S. 17-29-1102; and

(iv) does not create any requirement inconsistent with the Act.

Public Policy Purpose

Technology Neutrality → Regulatory Equivalence

We appreciate the flexibility written into the new proposed subsection **17-31-103(c)**. We drafted subsection **(d)** of **17-31-103** based on feedback from many DAO owners, looking to support a public policy of technology neutrality (blockchain or future evolution) in regulation and the adoption of "regulatory equivalence."ⁱ

Technology races ahead but laws change at a horse pace. The early introduction of motor cars gave rise to Red Flag lawsⁱⁱ whilst authorities were still debating haulage of dung on public thoroughfares. COALA in its "Model Law for Decentralized Autonomous Organizations"ⁱⁱⁱ has the principle of "functional equivalence," nominating mechanisms to be identified that substitute technology to perform the same substantive policy outcome. For example, a tamper-evident immutable source of truth (blockchain) means we can replace incremental record-keeping, such as annual reporting, with a process to audit the transaction logs and ratify the same set of events, no matter when those events are viewed. The chapter recognizes as much in the limiting of members' and disassociated members' information rights in section **17-31-112**.

Many administrative requirements are onerous when scaled to thousands of members rather than tens of managers. For example, we provided an engineering consultation to a DAO that has 12,000+ members. Even if only 1% of them are involved in transacting with a financial institution or off-chain contractor, they will need multiple, and frequently updated **Statements of Authority** in order to do so^{iv}. That's because a multi-signature holder is a dynamic role that rotates^v rather than a fixed office holder^{vi}. However, the change in control of a multi-signature wallet is recorded in the transaction history of a permissionless blockchain, which is totally transparent to the public but in a non-traditional temporal order. LexDAO advocates that software, certified by the registration agent(s) to be a regulatory substitute, be deemed to satisfy the procedural requirements of this filing. This change would also facilitate DAOs doing business in^{vii}, and *relocating to Wyoming*.

Proposed Ammendment

17-31-104 (e). Definition and election of decentralized autonomous organization status. A statement in the articles of organization shall establish how the decentralized autonomous organization shall be [m]anaged by the members, including to what extent the management will be conducted algorithmically.

Checkbox Options	Sample description
<i>presumptive</i> code deference	Highly algorithmic, emergency intervention only
<i>qualified</i> code deference	Mostly hands-off with regular/ occasional updates, often immutable to prevent flawed smart-contracts
<i>imperfect</i> code deference	Traditional operating agreement controls, smart contracts provide support for certain functions like voting
[TBA]	Other terms of art from common market accepted practice

Proposed “select one” checkbox for algorithmic management

Public Policy Purpose

Governance: Human Readable Operating Agreement

We worry that this change creates a further burden and adds complexity to DAO LLC formation. Under the proposed revision, organizers would be responsible for describing the DAO’s algorithmic management in plain English (versus the current checkbox form⁴). This may need to be prepared by a smart contract-literate attorney and is not required for a DAO using a traditional LLC wrapper. In some cases, how and to what extent a DAO is algorithmically managed can also be changed by a vote of its membership. Would doing so require an amendment to the articles of organization? We think this requirement would dissuade organizers and practitioners from using the DAO law because in our experience, they want to rely on the DAO’s smart contracts. Fundamentally, the extent to which any given DAO is managed algorithmically can already be determined—without translation errors—by reviewing its smart contract(s) on an open blockchain.

In the vein of streamlining organization and deferring to open blockchains, we would *propose deleting this requirement and not requiring any separate statement*. If the Select Committee feels that some information should be provided, we would alternatively propose a “select one” checkbox where organizers would represent their DAO LLC’s level of [code deference][algorithmic management]⁵:

We believe that these boxes would provide high-level information without creating as much room for confusion or translation errors as a more bespoke description.

⁴ See, e.g., CityDAO LLC Articles of Organization, available at: <https://wyobiz.wyo.gov/Business/FilingDetails.aspx?eFNum=115199227195057001066026049237017172020101159167>.

⁵ Andrew Hinks (2020) The Limits of Code Deference, 46 J. Corp. L. 869, available at: https://jcl.law.uiowa.edu/sites/jcl.law.uiowa.edu/files/2021-08/Hinkes_Final_Web.pdf.

Proposed Ammendment

17-31-105 (d). Formation.

~~An algorithmically managed decentralized autonomous organization may only form under this chapter if the underlying smart contracts are able to be updated, modified or otherwise upgraded.~~

17-31-109. Management.

Management of a decentralized autonomous organization shall be vested in its members or the members and any applicable smart contracts. ~~All~~ Smart contracts utilized by a decentralized autonomous organization ~~shall~~ [may] be capable of being updated, modified or otherwise upgraded.

Public Policy Purpose

Imperfect Operations Security

We appreciate that there are a number of situations where a DAO could benefit from upgrading its smart contracts. Our membership is troubled by this language requiring upgradability of smart contracts in the proposed **17-31-109** and in the original **17-31-105(d)** for several reasons. We concur with the deletion of **17-35-105(d)**.

At a high level, we would prefer the legislation remain neutral on technology choices, and *smart contract immutability is a technology choice*. More specifically, many DAOs use immutable smart contracts for security. When the Compound Protocol upgraded its smart contracts⁶ in late September last year, a *flaw was introduced that led to the loss of approximately \$50 million*.

Our experience is that a few specialist firms research and release smart contracts, and these are white-labelled by others with a change of GUI. This requirement would disincentivize this practice (which we view as generally positive for security purposes) because it prevents both currently-existing DAOs with immutable smart contracts and organizers that want to use vendor-provided immutable smart contracts from organizing under the Wyoming DAO Supplement.

We would instead propose replacing the last sentence of **17-31-109** with default immutable smart contract and “may update” as opt-in.

⁶ CBS News (4th Oct 2021) Crypto marketplace sent \$90 million to users, thanks to a bug. Now it wants the money back, available at <https://www.cbsnews.com/news/compound-crypto-89-million-dollars-funds-error-free-money/>

Proposed Ammendment

17-31-105. Formation.

(e) If the articles of organization filed pursuant to subsection (a) of this section does not include a *publicly available identifier* as required by W.S. 17-31-106(b), the person filing shall have thirty (30) days to provide the publicly available identifier to the secretary of state. If the publicly available identifier is not provided within thirty (30) days, the secretary of state shall reject the filing and the decentralized autonomous organization shall be deemed to have not been formed.

Public Policy Purpose

Public Address vs Private Doors

We feel that the requirement for public notice of a DAO smart contract address unnecessarily constrains DAO members to rely on a single smart contract or unchanging set of smart contracts. In reality, DAOs use different services from voting, to external treasury management, to token-gating, each governed by different smart contracts. Many DAOs migrate membership and assets as they evolve over time, not to mention the occasional hard fork requiring redaction of contracts. Refiling articles of organization every time the lock changes, rather than when the door is repositioned, adds unnecessary friction to maintaining a LLC DAO in Wyoming. Our recommendation is to strike this requirement by deleting **17-31.107(a)(iii)** or, alternatively, to require that a DAO LLC *keep this information up-to-date with their registered agent*, which will be responsible for maintaining these references for the state.

17-31-106. Articles of organization.

(b) In addition to the requirements of subsection (a) of this section the articles of organization shall include a publicly available identifier[, or nominate persistent mechanism to access such,] of any smart contract directly used to manage, facilitate or operate the decentralized autonomous organization.

17-31-107. Amendment or restatement of articles of organization.

(a) Articles of organization shall be amended when:

~~(iii) The decentralized autonomous organization's smart contracts have been updated or changed.~~

(column intentionally left blank)

Citations

- i De Filippi, P., Mannan, M., & Reijers, W. (2021). The A legality of Blockchain Technology. Policy and Society, Cambridge University Press, available at: <https://blog.gnosis.pm/inventories-not-identities-7da9a4ec5a3e>. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4001696.
- ii Edwards, L. (2007). The Internet and Security: Do We need a Man With A Red Flag To Walk In Front of Computers?. SCRIPT-ed, 4(1), available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1159610
- iii Coalition of Automated Legal Applications (2020) Model Law for Decentralized Autonomous Organizations (DAO), available at: <https://coala.global/wp-content/uploads/2021/06/DAO-Model-Law.pdf>
- iv Per W.S. 17-29-302(a)(ii)(B), Statements of Authority are required to make “**transactions on behalf of, or otherwise act for or bind, the company.**”
- v Gnosis (2021) Inventories, not Identities: Why multisigs are the future of online accounts, available at: <https://blog.gnosis.pm/inventories-not-identities-7da9a4ec5a3e>.
- vi Hung, H. (1998). A typology of the theories of the roles of governing boards. Corporate Governance: An International Review, 6(2), 101-111, available at: [https://www.academia.edu/download/45771678/A typology of the theories of the roles_20160519-11080-zftak3.pdf](https://www.academia.edu/download/45771678/A_typology_of_the_theories_of_the_roles_20160519-11080-zftak3.pdf)
- vii Andrej Savin (2019) Rule Making in the Digital Economy: Overcoming Functional Equivalence as a Regulatory Principle in the EU, *Journal of Internet Law*, 22(8), 1-31, available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3340886

The Alegality of Blockchain Technology

Primavera De Filippi, Morshed Mannan, Wessel Reijers

Similar to the early days of the Internet, today, the effectiveness and applicability of legal regulations are being challenged by the advent of blockchain technology. Yet, unlike the Internet, which has evolved into an increasingly centralised system that was largely brought within the reach of the law, blockchain technology still resists regulation and is thus described by some as being “*alegal*”, *i.e.*, situated beyond the boundaries of existing legal orders, and therefore challenging them. This article investigates whether blockchain technology can indeed be qualified as *alegal*, and the extent to which such technology can be brought back within the boundaries of a legal order by means of targeted policies. First, the article explores the features of blockchain-based systems which make them hard to regulate, mainly due to their approach to disintermediation. Second, drawing from the notion of *alegality* in legal philosophy, the article analyses how blockchain technology enables acts that transgress the temporal, spatial, material and subjective boundaries of the law, thereby introducing the notion of “*alegality by design*” —as the design of a technological artefact can provide affordances for *alegality*. Third, the article discusses how the law could respond to the *alegality* of blockchain technology through innovative policies encouraging the use of regulatory sandboxes to test for the ‘functional equivalence’ and ‘regulatory equivalence’ of the practises and processes implemented by blockchain initiatives.

Keywords: blockchain technology, decentralized autonomous organisations, *alegality*, legal theory, legal philosophy, blockchain governance, regulatory sandbox

COALITION OF AUTOMATED LEGAL APPLICATIONS

**MODEL LAW FOR DECENTRALIZED
AUTONOMOUS ORGANIZATIONS
(DAOS)**

coala

2021

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Chapter 2

Formation and Proof of Existence

Article 4. FORMATION REQUIREMENTS—

- (1) In order for a DAO to benefit from legal personality, it must fulfill the following requirements:
 - (a) The DAO must be deployed on a Permissionless Blockchain;
 - (b) The DAO must provide a unique Public Address through which anyone can review the DAOs' activities and monitor its operations;
 - (c) The whole software code of the DAO must be in Open-Source Format in a Public Forum to allow anyone to review it;
 - (d) The software code of the DAO must have undergone Quality Assurance;
 - (e) There must be at least one GUI that will allow a layperson to read the value of the key variables of the DAO's smart contracts and monitor all transactions originating from, or addressed to, any of the DAO's Smart Contracts. The GUI will also specify whether Members are able to redeem their Tokens without restrictions and if not, the GUI will clearly mention the restrictions that are in place;
 - (f) The DAO must have By-Laws that are comprehensible to a layperson. The By-Laws must be publicly accessible via a GUI or a Public Forum. Sensitive information may be redacted from the By-Laws before their publication, if those redactions are necessary to protect the privacy of individual Members or Participants in the DAO;

- (g) The governance system of the DAO must be technically decentralized, although not necessarily operationally decentralized, as per Article 3(7).
 - (h) Independent of the chosen governance system, there must always be at least one Member of the DAO at any given time;
 - (i) There must be a publicly specified mechanism that allows a layperson to contact the DAO. All Members and Administrators of the DAO must be able to access the contents of this communication mechanism;
 - (j) The DAO must refer to or provide a Dispute Resolution Mechanism that the DAO, Members and Participants will be bound by;
 - (k) The DAO must refer to or provide a Dispute Resolution Mechanism to resolve any disputes with third parties that, by their nature, are capable of being settled by alternative dispute resolution.
- (2) The DAO will, upon meeting the formation requirements in Article 4(1), have limited liability by default, subject to the provisions of Article 5.
 - (3) Concurrent fulfillment of the requirements in Article 4(1), and an announcement by the DAO that it has fulfilled those requirements is deemed conclusive evidence of the DAO's recognition under this Model Law and does not require certification from, or registration by, an Accreditation Authority.
 - (4) A jurisdiction adopting the Model Law may authorize an Accreditation Authority to monitor whether a DAO continues to meet the requirements for legal personality under the Model Law.
 - (5) A DAO may request confirmation from an Accreditation Authority, if such an authority exists, to determine whether the DAO complies with the requirements for legal personality under the Model Law.



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Rule Making in the Digital Economy: Overcoming Functional
Equivalence as a Regulatory Principle in the EU

Andrej Savin

- does the service become impossible or is significantly hampered by being subjected to traditional legal framework
- are there any other reasons justifying its inclusion under the other framework (*e.g.*, strong public policy reasons, unlawful competition, etc.)

If the answer to all the three questions is positive, the lawmaker should refrain from using functional equivalence to regulate disruptive services and should make efforts to outline a new framework. Under this approach, functional equivalence would still be appropriate in cases where the service does not pass the test. A noninnovative service thus deserves to be treated as functionally equivalent. A service that becomes impossible as a result of the application of legacy models should not be subject to them. A service in violation of transport, health, or other laws cannot hide under the mantle of innovation.

There is no doubt that functional equivalence can be exceptionally useful in its primary function as an *aid* in finding a rule for the digital world. Analyzing the application of functional equivalence in the digital world, Chris Reed states that it is possible to lay down general principles of law and create specific sets to deal with specific difficulties online in all cases where a dialogue between the stakeholders and the regulators is possible.⁶⁵ If this is not the case, however, the only effective way is to devise a new formulation of the rule which would be applicable to both online and offline activities.

One final observation also has to be made. Using any regulatory framework has its limitations.⁶⁶ It seems that less formal governance structures may be necessary and are already wide-spread. This makes the lawmakers' task more complex for, not only is the

⁶⁵ Chris Reed, *op. cit.*, p. 119.

⁶⁶ *See* Harvey, *op. cit.*, p. 349.

task to identify the regulatory method but also to take into account the relationship of regulation to those governance structures. Faced with the challenge of the new technologies, regulators have rarely admitted that *governance*⁶⁷ may be a better and more convenient term to describe how the Internet is managed. The term—although acquiring different meanings in different contexts—is nevertheless accurate in capturing one important feature of the Internet—there is a multitude of actors and authority structures at work. Only vague attempts have been made in theory of Internet regulation to understand how this process takes shape. Marsden has effectively argued that the key to understanding Internet regulation is the relationship between state and nonstate regulation.⁶⁸ We would add that where disruption is desirable, the regulator should tap into the potential that governance has to solve some of the problems that regulation cannot. That way, similar services can be “circled” by regulation looking for functionally equivalent ones, not in order to put the new under the old but in order to more easily create the entirely new.

⁶⁷ See Peter Humphreys and Seamus Simpson, Regulation, *Governance and Convergence in the Media* (Edward Elgar 2018), pp. 213–215.

⁶⁸ See Chris Marsden, *Internet Co-Regulation: European Law, Regulatory Governance and Legitimacy in Cyberspace* (Cambridge University Press 2011).

The Limits of Code Deference

Andrew M. Hinkes*

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ABSTRACT

Using smart contract technology, entrepreneurs have created technical structures that allow their users to access novel financial services that operate without legally addressable counterparties and enable groups of people to act collectively to affect rights to digital assets. We call these various structures “decentralized ventures.” These decentralized ventures enable transactions among their participants in accordance with rules created and enforced by their code; human participants in these decentralized ventures interact with the venture, and sometimes with each other, using smart contracts. Smart contracts, however, may be flawed or behave in unexpected ways. What happens

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when a smart contract defect or error harms a decentralized venture participant? Some participants may sue, seeking damages, to reverse the smart contract outcome, or to enjoin the venture's ongoing operation. Litigation over smart contract outcomes may disrupt—if not destroy—decentralized ventures and may have widespread unintended negative effects upon the rights and property of other decentralized venture participants and on third parties.

Many decentralized ventures attempt to prevent their participants from suing over smart contract outcomes by requiring that their human participants defer to and agree to be bound to the outcome of smart contract execution. We call this concept “code deference.” Code deference is critical to the orderly operation of decentralized ventures but has received little attention in the legal literature. This article examines legal and technical attempts to impose code deference on human users of certain types of decentralized ventures. It addresses strategies observed in practice, ranging from generalized obfuscation and on-system dispute resolution, to waivers and contractual covenants not to sue. And it examines other proposed strategies not yet observed in practice. It is likely, however, that, absent significant legal reform, no approach based in code or in law can prevent a lawsuit over a smart contract outcome.

While absolute code deference may never be achievable, code deference attempts should be viewed as mechanisms to rebalance incentives by increasing the opportunity costs for a decentralized venture participant to sue over a smart contract outcome and providing efficient alternatives to litigation. Even with inherent limitations, code deference provisions may functionally create code deference in all but a narrow set of circumstances. Effective incentives toward code deference move participants in decentralized ventures closer to the ideal of systems that allow parties to transact using rules created and enforced by code rather than rules created and enforced by a legal system.

I. INTRODUCTION

Smart contracts have become a common topic of academic scholarship.¹ Legal academics have attempted to contextualize smart contracts within existing law using doctrines of interpretation and construction typically applied to legal contracts.² This approach occasionally views smart contracts as legal contracts, but more often as components of a broader set of representations and promises which, considered together, may constitute legal contracts.³ Through this lens, disputes over smart contracts may be

1. As of June 14, 2021, 741 law review and journal articles available on Westlaw include the term “smart contract.”

2. See Reggie O’Shields, *Smart Contracts: Legal Agreements for the Blockchain*, 21 N.C. BANKING INST. 177, 185–87 (2017); Stuart D. Levi & Alex B. Lipton, *An Introduction to Smart Contracts and Their Potential and Inherent Limitations*, HARV. L. SCH. F. CORP. GOVERNANCE (May 26, 2018), <https://corpgov.law.harvard.edu/2018/05/26/an-introduction-to-smart-contracts-and-their-potential-and-inherent-limitations/> [https://perma.cc/RND5-J6GM] (addressing the legal enforceability of “code only contracts”).

3. Shaanan Cohney & David A. Hoffman, *Transactional Scripts in Contract Stacks*, 105 MINN. L. REV. 319, 320 (2020); LABCFITC, A PRIMER ON SMART CONTRACTS 4 (2018), https://www.cftc.gov/sites/default/files/2018-11/LabCFITC_PrimerSmartContracts112718_0.pdf [https://perma.cc/5EHJ-7UPK] (“[A] ‘smart contract’ is a set of coded computer functions [that] . . . [m]ay