



KLEROS AND THE ALABAMA ARBITRATION ACT

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K L E R O S

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Contents

Introduction.....	4
Smart Contracts: The Basis for Blockchain Arbitration.....	5
The State of Smart Contracts in the United States	6
State of Blockchain Technology in Alabama.....	8
Blockchain Based Arbitration as an Extension of Online Dispute Resolution	9
Pre-Dispute Consumer Arbitration Agreements in Alabama.....	11
Pre-Dispute Arbitration Agreements in Alabama Falling under the FAA	12
The Alabama Arbitration Act as The Rules Under Which Arbitration Will Be Conducted.....	14
1. The Form of the Smart Contract.....	15
Smart Contract Code and Comments as a Written Agreement Between the Parties	16
Smart Contracts and the Kleros Arbitration Platform	18
2. The Seat of Arbitration	19
Seated in Alabama – Set in Cyberspace	19
3. The Validity and Arbitrability of the Subject-Matter of the Smart Contract.....	20
Arbitrability and the Blockchain.....	21
5. The Law Applicable to the Merits of the Dispute	23
Procedural Law of the Alabama Arbitration Act on the Blockchain.....	23
6. The Number of Arbitrators.....	24
Number of Arbitrators Under the Alabama Arbitration Act and on the Kleros Platform	25
7. The Technical Qualifications of the Arbitrators.....	25
Cryptoeconomics and Game Theory to Provide Impartiality on the Blockchain	26
Cryptoeconomics and Trust on the Kleros Platform	27
8. The Confidentiality of the Contract Dispute	28
Conclusion.....	29

Kleros and the Alabama Arbitration Act

Introduction

Legal services are becoming highly disrupted as new technologies are being applied to traditional legal procedures. As one set of researchers state, "Legal Tech startups are revolutionizing the legal industry by increasing the speed, accuracy, and performance of legal services or by replacing them altogether with new ideas."¹ Further, as one researcher has observed, whether the legal community endorses it or not, "the use of technology is increasing private enforcement."² This revolution may soon be upon alternative dispute resolution (ADR) practitioners as blockchain enabled smart contracts are not only being used to transfer value but also to settle disputes.

Today blockchain based smart contracts "are relatively simple ... comprised of relatively basic if/then statements on top of a blockchain platform (such as Ethereum)" and "do not govern complex contractual relationships."³ But in the near future a "smart contract could look very much like a traditional paper contract, except that certain parts of that contract (e.g., performance obligations) will be automated."⁴ Due to this foreshadowing of contractual automation, blockchain based arbitration and dispute resolution is recognized as an emerging field for handling commercial disputes.⁵ Additionally, as researchers note, not only are private entities competing over the authority to shape the legal rules, but also "national jurisdictions are competing to become the 'Silicon Valley of the crypto economy.'"⁶

This article will focus on the Kleros platform as it currently has the most detailed published research available regarding blockchain based arbitration.⁷ Moreover, the Kleros platform seeks to develop a smart contract standard that Kleros expects "all smart contracts to use when they need to use arbitration."⁸ This includes the way in

which smart contracts are built, the way in which evidence is presented, and for all arbitrators to eventually be “plug and play” as desired by the parties.⁹

Further, this article will discuss generally the arbitration laws in the United States and how the state of Alabama's laws favoring commercial arbitration, could make the state a favorable locus for blockchain based arbitration. As one researcher into blockchain and U.S. state law suggests, “Like any contract, smart contracts should contain a dispute resolution clause, which specifies, among other things, choice of law and choice of jurisdiction.”¹⁰ Thus, Alabama, once referred to sarcastically as the “Arbitration State”¹¹ could earnestly find itself as the “Blockchain Arbitration State.”

Smart Contracts: The Basis for Blockchain Arbitration

Generally, a legal contract is defined as “an arrangement between two or more competent parties who intentionally and voluntarily exchange money, promise, or thing of value in return for money, promise, or thing of value, none of which is for a purpose against the law or public policy.”¹² Contracts have enabled people to exchange goods, services, and value between themselves for thousands of years.¹³ Computer scientist Nick Szabo is credited with originating the term “smart contract” in a 1996 article in *Extropy* magazine.¹⁴ Szabo's stated basic definition of a smart contract is as a “set of promises, specified in digital form, including protocols within which the parties perform on the other promises.”¹⁵

On the blockchain, a smart contract is essentially immutable computer code deployed across a network of computational devices (termed “nodes”). Smart contract execution is initiated by a message embedded in this code that enables the smart contract transaction. Smart contracts differ from general cryptocurrency transfers because smart contracts can enable the transfer of asset and their attendant rights in addition to digital currency transfers.

Smart contracts are currently determined to be “many years away” from “being able to determine more subjective legal criteria, such as whether a party satisfied a commercially reasonable efforts standard.”¹⁶ Further, the autonomous and immutable nature of smart contracts “makes it crucial that any self-enforcing aspects of parties’ agreement are anchored within a valid legal framework and that the parties identify at the outset the applicable dispute resolution mechanism.”¹⁷ As one researcher for the Kleros platform states, this pre-dispute arbitration agreement is necessary for a blockchain based arbitration platform to be appropriate because it must “[h]old the disputed payment in escrow while a dispute is being processed and/or have the ability to oblige the losing party to comply with the dispute and pay the winner.”¹⁸ Therefore, parties must pre-incorporate into the smart contract’s programming “exceptions or conditions” that would be “structured to permit arbitration.”¹⁹

Ultimately, parties will need to not only choose the programming of the contract and arbitration agreement, but also the legal framework which will control the arbitration. As blockchain and arbitration research has noted, choosing where to set smart contract arbitration should be prioritized by parties.²⁰ This is due to the fact that “some jurisdictions are not “arbitration-friendly” as they have laws which restrict party autonomy.”²¹ As will be discussed, while certain consideration will need to be made, arbitration under the Alabama Arbitration Act is “arbitration-friendly” and allows the parties a high degree of procedural autonomy.

The State of Smart Contracts in the United States

The 2018 Joint Economic Report of the President of the United States concluded “Blockchain,” is “a secure transmission and recordkeeping technology in its infancy with vast potential to revolutionize the forms in which we transact and document commercial activity of virtually any kind around the world.”²² As of this writing there

has been no federal legislation or ruling to provide a clear nationally recognized legal definition of a "smart contract" in the U.S.

Even without a federal statute directly on point regarding the definition of "smart contract" the Chamber of Digital Commerce announced it believes existing U.S. federal law supports the enforceability of smart contracts without the formation of state legislation. The Chamber of Digital Commerce asserts the Federal Electronic Signatures in Global and National Commerce Act ("ESIGN Act")²³ and the Uniform Electronic Transaction Act ("UETA")²⁴ provide enough legal basis for a smart contract to execute terms between parties as a legal contract.²⁵

Despite this assertion by the Chamber of Digital Commerce, several U.S. states have passed their own legislation. Below is a comparison of two U.S. state statutes, from Tennessee and Arizona respectively, to demonstrate the differences in legal definitions of the term "smart contract." (NOTE: Bolding added to demonstrate where these statutes are similar and how much they also differ.)

Tennessee Code Annotated

"Smart contract" means an **event-driven** computer **program**, that executes on an electronic, **distributed, decentralized, shared, and replicated ledger** that is used to automate transactions, including, but not limited to, transactions that:

- (A) **Take custody over and instruct transfer of assets on that ledger;**
- (B) Create and distribute electronic assets;
- (C) Synchronize information; or
- (D) Manage identity and user access to software applications.²⁶

Arizona Revised Statutes

"Smart contract" means an **event-driven program**, with state, that runs on a **distributed, decentralized, shared and replicated ledger** and

that can **take custody over and instruct transfer of assets on that ledger.**²⁷

Currently the National Conference of State Legislatures maintains a registry of U.S. state legislation involving blockchain or smart contracts.²⁸ This registry demonstrates that currently eight U.S. states have passed or have proposed legislation regarding blockchain technology. Meanwhile, Sagewise.io maintains a database of state legislation in which at least thirty states have legislation discussing blockchain or smart contract technology.²⁹

State of Blockchain Technology in Alabama

While there are no blockchain or smart contract specific regulations enacted in Alabama, the Brookings Institute classified Alabama as “Organized” in its initial assessment of the state government’s level of “engagement with the blockchain technology.”³⁰ This classification is for states that have “succeeded in passing some legislation.”³¹

The Alabama Monetary Transmission Act, effective August 2017, does involve virtual currencies.³² The Act defines “Monetary Value” as “[a] medium of exchange, including virtual or fiat currencies, whether or not redeemable in money.”³³ Further, the Act defines “Money Transmission” as “[s]elling or issuing payment instruments, stored value, or receiving money or monetary value for transmission.”³⁴ This would presumably include virtual currency. Moreover, the sale of virtual currencies could be taxed under the definition of “marketplace facilitator.”³⁵

Blockchain Based Arbitration as an Extension of Online Dispute Resolution

Generally, Online Dispute Resolution (ODR) refers “to the use of Alternative Dispute Resolution (ADR) mechanisms over the internet ... to deal with both offline- and online-related disputes.”³⁶ The Joint Technology Committee of the Conference of State Court Administrators finds ODR to not be a “theory” or “bleeding-edge technology,” but “a proven tool with a documentable record of success over a sustain period of time” and that “billions of disputes have been resolved outside of court using ODR.”³⁷

There have been four historical phases in the development of ODR.³⁸ The first, being an “amateur stage,” the next being one in which “ODR developed dynamically and the first commercial web portals that offered services ... were established.”³⁹ The third termed the “business” phase “ran from 1999 to 2000.” And now post the “year 2001” arbitration finds itself in the fourth phase where “ODR techniques [are being] introduced into institutions such as the courts and administration authorities.”⁴⁰ Prior research of online dispute resolution has found it “particularly appropriate with respect to simple fact patterns and small claims” and thus appropriate for “users of small claims and documents-only arbitration schemes.”⁴¹ These types of disputes are very much in line with the blockchain based arbitration currently envisioned on the Kleros platform.

With smart contracts, dispute resolution “could take place digitally online, so that parties in different countries could resolve disputes quickly and efficiently, without having to travel or incur other related expenses.”⁴² Thus, this new development of utilizing arbitration agreements embedded in the programming logic of blockchain technology enabled smart-contracts to handle these types of disputers, are a simple and efficient step forward for ODR. Current scholarship acknowledges that

the impact of online dispute resolution and “expert systems” (which blockchain and smart contracts are quickly becoming) on legal employment is minimal. This is due to the fact that, “disputes that these systems resolve are generally small stakes e-commerce issues, for which it would not be economically feasible to hire a lawyer and litigate.”⁴³ But, the “impact on lawyer employment may be significant in the future...” because “when used, they entirely replace lawyers (and in the case of online dispute resolution, judges as well).”⁴⁴

Pre-Dispute Consumer Arbitration Agreements in the United States

Today, consumer arbitration agreements are more and more prevalent in the American marketplace. But the United States has a peculiar history and set of laws dealing with arbitration agreements. And as will be discussed below, the state of Alabama has some of the most peculiar history and legal structure on this matter.

Until the 1920s, “courts in the United States generally refused to enforce agreements to arbitrate, and such agreements were revocable” by any party if made prior to an award.⁴⁵ This was due to the fact that under American common law, “private contracts to arbitrate future disputes that might arise were perceived as unenforceable efforts to oust courts of jurisdiction.”⁴⁶

In 1925, the U.S. Congress passed the United States Arbitration Act, commonly known in practice as the Federal Arbitration Act (hereinafter the “FAA”).⁴⁷ As the Supreme Court of the United States has held, “the Act’s supporters saw the Act as part of an effort to make arbitration agreements universally enforceable.”⁴⁸ Thus to “get a Federal law” that would “cover” areas where the Constitution authorized Congress to legislate, namely, “interstate ... commerce.”⁴⁹ Therefore, the FAA’s basic purpose is to overcome any U.S. courts’ refusal to enforce arbitration

agreements and "put arbitration provisions on "the same footing" as a contract's other terms,"⁵⁰ when dealing with trade amongst U.S. states.

Pre-Dispute Consumer Arbitration Agreements in Alabama

Alabama Code article 8-1-41(3) voids the enforcement of pre-dispute arbitration agreements.⁵¹ Further, historically, the interpretation of the Alabama Constitution as guaranteeing an individual the right to a jury trial was seen "as standing in the way of binding arbitration agreements."⁵² Thus, Alabama courts have had a long and complicated relationship with pre-dispute arbitration agreements. As outlined above, the computer code utilized to modify performance of a smart contract for arbitration purposes must be "pre-installed" in the programming of the contract before a dispute occurs.

Currently, in Alabama, the executive branch through several orders by Alabama governors has extolled the virtues of Alternative Dispute Resolution. Most notably in Executive Order Number 07 stating, "alternative dispute resolution (ADR) offers a number of voluntary procedures which, when properly employed, commonly result in more timely, less costly dispute resolution than traditional litigation" and that "in Alabama, effective alternatives for resolving conflict are desirable."⁵³ Moreover, the Alabama legislature unambiguously promotes the use of arbitration in Alabama Code article 6-6-1 which declares it is the "duty of all courts to encourage the settlement of controversies pending before them by a reference thereof to arbitrators."⁵⁴ While this statute applies to post-contract disputes already before an Alabama court, as will be discussed below, it can be applied "when the reference [in a private contract] to arbitrators is made under the statute, the terms of the statute will be read into the agreement, and it will be interpreted in the light thereof."⁵⁵

Furthermore, as the Alabama Supreme court has long recognized, “statutory arbitration extended advantages unknown to the common law.”⁵⁶ These advantages are such “as giving the [arbitration] award the effect of the verdict of a jury, and permitting a judgment to be entered ... dispensing with the common-law necessity of the suit.”⁵⁷ Thus, the advantage of Alabama statutory arbitration is also an advantage for parties seeking to use blockchain based arbitration as a more expedient form of arbitration. This is because “many states’ arbitration statutes require a court to confirm an arbitration award before the court enters it as a judgment and the award creditor may enforce it.”⁵⁸

Today, the Alabama Dispute Resolution Center recognizes that consumer arbitration agreements are commonly found in various contracts such as, “consumer loan documents, credit card application, automobile purchase agreements, stock broker contracts, home purchase documents, computer and other equipment purchase ..., nursing home contracts, and ... service agreements...”⁵⁹ The next section will discuss, how through incorporation of the Federal Arbitration Act (FAA), the Alabama Arbitration Act is able to apply to pre-dispute arbitration agreements.

Pre-Dispute Arbitration Agreements in Alabama

Falling under the FAA

In an arbitration agreement a choice-of-law clause is generally defined as a “contractual provision by which parties designate the jurisdiction whose law will govern any disputes that may arise between the parties.”⁶⁰ In Alabama, “parties may select the rules of arbitration through the use of choice-of-law provisions.”⁶¹ But due to the fact that parties to a smart contract must embed the code of their arbitration platform at the outset of the contract, Alabama law presents some unique challenges.

Section 8-1-41(3) of the Alabama Code of 1975, provides that a pre-dispute agreement to submit to arbitration "cannot be specifically enforced."⁶² But as the Alabama Supreme Court has declared "the application of [§ 8-1-41(3)] has] been relegated to the rare case of a purely intrastate transaction that could not be said to 'involve commerce' in any way."⁶³ Thus particularly any agreement to settle a dispute by arbitration involving commerce is now typically upheld in Alabama under the FAA.⁶⁴

In more recent cases, the Alabama Supreme court has consistently held that "the FAA preempts state law and renders an arbitration agreement enforceable" if the arbitration agreement "is voluntarily entered into and is contained in a contract that involves interstate commerce."⁶⁵ Further, the Alabama Supreme Court has held, in agreement with several previous U.S. Supreme Court holdings, that the manner of arbitration "is a matter of contract" to be 'rigorously enforce[d]' according to the terms of the parties' agreement."⁶⁶ These terms include "with whom [the parties] choose to arbitrate their disputes" and "the rules under which that arbitration will be conducted."⁶⁷

Generally, "there is a "strong default presumption . . ." ⁶⁸ when an arbitration agreement is upheld under the FAA "that the FAA, not state law, supplies the rules for arbitration"⁶⁹ In *Robertson v. Mount Royal Towers*, the Alabama Supreme Court held this is not necessarily the case. ⁷⁰ In this case, the Alabama Supreme Court held in accordance with the prior ruling of the U.S. Supreme Court in *Volt Information Sciences, Inc. v. Board of Trustees of Leland Stanford Junior University*⁷¹ about "whether parties may designate state law to govern the scope of an arbitration clause in an agreement otherwise covered by the FAA."⁷² The Alabama Supreme Court upheld, as in *Volt*, that the policy behind the FAA "is simply to ensure the enforceability, according to [the parties'] terms, of private agreements to arbitrate."⁷³ Thus, in Alabama, "parties may use choice-of-law provisions to designate state law

to provide the procedural rules under which arbitration will be conducted"⁷⁴ even when there is state procedural rules not available under the FAA.

Furthermore, in *Robertson*, the Alabama Supreme Court declared that "generic language in an arbitration agreement indicating that the parties intended for their arbitration to be governed by "the laws of the state" ... would not preempt the FAA" in regards to pre-dispute arbitration.⁷⁵ This is because Alabama has "not developed rules of arbitration for dealing with pre-dispute agreements" outside the FAA. Thus, the FAA "is part of the arbitration laws of Alabama and can be applied to arbitration administered "as provided by Alabama law."⁷⁶

The Alabama Arbitration Act as The Rules Under Which Arbitration Will Be Conducted

In Alabama there are two legal methods for arbitration, either through common law established by the courts or by statute passed by legislation. Because of the formality necessary when dealing with smart contracts, the statutory method is preferable due to the written formal obligations with which the parties must comply. The statute dealing with arbitration is the Alabama Arbitration Act, codified in the Alabama Code at §§ 6-6-1 through 6-6-16. This statutory framework "establishes the procedures by which disputes may be submitted to arbitration and by which arbitration awards are entered in Alabama."⁷⁷

The governing law of a dispute is relevant because parties tend to be are familiar with the laws of their home state. Thus, parties usually want their state's law to apply to a dispute involving a commercial contract (smart or otherwise). In fact, international companies situated in the state of Alabama have chosen to arbitrate all disputes arising under a contract utilizing the Alabama Arbitration Act.⁷⁸

The following sections of this paper, numbered sections 1 through 8, will discuss the application of the Alabama Arbitration Act (AAA),⁷⁹ as the “rules under which” arbitration is conducted with a comparison of how those rules interact with the Kleros arbitration platform. An eight-point rubric developed by Ibrahim Shehata will be used.⁸⁰

1. The Form of the Smart Contract

There are recognized “legal risks with having the smart contract entirely in code language.”⁸¹ Thus, Shehata recommends parties express their intent in a natural-human language text version of their smart-contract termed a “Ricardian Contract.”⁸² A Ricardian Contract is similar to Nick Szabo’s proposed smart contract in that, “Ricardian contracts were largely a theoretical construct prior to the blockchain, and in particular, Ethereum’s successful implementation of blockchain smart contracts.”⁸³ Today, in the blockchain technology sector, Ricardian Contracts are generally understood to be, “digital documents that define the terms and conditions of an interaction between two or more parties, written in human readable text, which is then cryptographically signed and verified.”⁸⁴

Another method may be to put “nonoperational clauses” which are “sample provisions that are not readily executable by smart code” within the smart contract.⁸⁵ They would operate much like comments which are for humans to read and are not operated upon by the computer program. Today “corporate coding standards force [programmers] to write certain comments for legal reasons” such as for copyright and authorship purposes.⁸⁶ Thus there is ample research into the proper construction of useful comments.

These non-operational clause provisions could include selection of governing law, jurisdiction, and waiver of the jury trial.⁸⁷ The programming language Solidity,

currently used to draft many smart contracts such as those used on the Kleros platform, provides for comments within the code. In Solidity because comments are not needed for execution they are removed during compilation.⁸⁸ Thus not increasing the gas cost on the Ethereum blockchain. Solidity's single and multi-line comments allow a drafter to insert such information regarding the contract as title, author, and notice – which explains to the end user what the contract does.⁸⁹

No matter the method used to communicate the intent of the parties, as De Fillipi and Wright note, smart contracts “do not operate in a vacuum,”⁹⁰ thus, “[p]arties should negotiate their agreement before putting it into code and manifest their consent using a digital signature.”⁹¹

In Alabama, it is under the purview of the courts as to whether an arbitration agreement is enforceable under the Alabama Arbitration Act. A court's review includes determining whether the parties entered into a valid agreement to arbitrate, whether the arbitration clause is valid, and the determination of the proper parties to the arbitration agreement. Thus, it is of high importance that an agreement to arbitrate through a smart contract be in such a form as to be understandable to an Alabama court.

Smart Contract Code and Comments as a Written Agreement Between the Parties

In Alabama, the enforcement of an arbitration agreement rests on its interpretation as a contract because in Alabama, “arbitration agreements are essentially just a species of contract”⁹² This is especially true in commercial arbitration. And as discussed above, “predispute arbitration agreements cannot be specifically enforced under Alabama law”⁹³ but this provision has been superseded by the Federal Arbitration Act (FAA).⁹⁴ And now the FAA, “is part of the arbitration laws of Alabama and can be applied to arbitration administered as provided by Alabama

law."⁹⁵ Therefore, when there is "[a] written provision in ... a contract evidencing a transaction involving commerce"⁹⁶ the FAA "binds [Alabama courts] to faithfully apply general principles of Alabama contract law when considering a challenge to the validity of an arbitration agreement."⁹⁷

The general principles of Alabama contract law, "include: an offer and an acceptance, consideration, and mutual assent to terms essential to the formation of a contract."⁹⁸ Furthermore, in Alabama there must be ""clear] and unmistakabl[e]" evidence" that the parties agreed to arbitrate that issue."⁹⁹ Thus, as the Supreme Court of Alabama has held, "Alabama statutes dealing with arbitration allow it as the exclusive remedy only if all parties to the controversy consent."¹⁰⁰

Moreover, under § 6-6-3 of the Alabama Arbitration Act, parties must have at least a signed concise written statement regarding the "matter in dispute" stating "that they desire to leave the determination" of this matter to named arbitrators.¹⁰¹ Further, this statement "must be delivered to the arbitrators ... together with a list of the witnesses either party may desire to examine."¹⁰² Alternatively, this statement may be made through the signing of another contract. In Alabama, "[a] contract may incorporate the terms of another document by reference."¹⁰³ For example, the standard terms of service of a company which contains an arbitration agreement.¹⁰⁴

Historically the judgment of Alabama courts has been the statutory provision that parties state in writing their desire to leave the determination of the matter in dispute to arbitrators; and the delivery of a list of the witnesses either party may desire to examine, is "merely" directory. Thus, "compliance with [this section of the statute] is not essential to give an award the character and qualities of an award."¹⁰⁵ Thus, the "concise statement of the matter in dispute," is not meant to be as detailed "as would be necessary in [a court] pleading; its main object being to direct and confine the attention of the arbitrators to the subject submitted to [the arbitrators'] investigation and decision."¹⁰⁶ Therefore, while a smart contract in purely code form

may not, to an Alabama court, meet these basic requirement, a “natural language” supplement would be easy to devise to “direct and confine” the arbitration to a specific matter.

Smart Contracts and the Kleros Arbitration Platform

Kleros does not require parties to have the smart contract in a natural language.¹⁰⁷ But it does allow for parties to create a contract in a natural language (for example English) and then then designate Kleros as the arbitrator. Further, Kleros directs that parties should “include a cryptographic commitment to that contract in [their] Ethereum smart contract.”¹⁰⁸ Alternatively, the Kleros platform allows for “[w]hen there is no written agreement.” Here, when there is no written agreement, plaintiffs “present communication with the defendant prior to the agreement to prove that the defendant did not meet the requirements agreed upon.”¹⁰⁹

Further, on the Kleros platform, parties must specify the subcourt where their dispute will be arbitrated. On the Kleros platform, “[d]ifferent disputes require different types of proceedings.”¹¹⁰ Thus, this type of agreement would need a clear expression in a human language of the intent of the parties in order to uphold any agreement should an Alabama court need to interpret the assent of the parties.

Practitioners in Alabama could be of great use to the Kleros platform in devising simple human readable statements which demonstrate an intent to arbitrate under the Alabama Arbitration Act. Presented here is a modified version of an “example of a contract clause that parties use to provide for arbitration of future disputes”¹¹¹ suggested by the Alabama Center for Dispute Resolution:

Any controversy or claim arising out of or relating to this contract, or the breach thereof, shall be settled by arbitration administered by the Kleros Dispute Resolution System under its Commercial [or Consumer, or whichever rules applies] Arbitration Rules, and judgment on the award rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof.

It should be of note there are already projects working on such templates, for example the Accord Project and OpenLaw.¹¹² But as this industry is growing, there is ample opportunity for local practitioners to add their expertise.

2. The Seat of Arbitration

The Kleros blockchain arbitration platform aims to be applied by anyone in any geographical location. But as Shehata points out, "Parties to smart contracts should prioritize their seat of arbitration."¹¹³ This is due to the fact that, as Warren writes, the seat of arbitration, "will normally determine the law of the procedure which the arbitration adopts as well as the involvement/intervention, as appropriate, which the courts exercising jurisdiction over the seat, will have."¹¹⁴ Further, as Warren notes, the seat will "also determine the extent to which the local court will involve itself in the arbitral process."¹¹⁵ These determinizations are such as the degree to which an arbitral award may be challenged and the extent to which judicial review is available to parties.¹¹⁶ Both of these factors "will govern the extent to which an award is considered final."¹¹⁷ Thus, parties to a smart contract based arbitration, the platform providers, and attorneys must not only ask whether the arbitral seat's courts recognize smart contracts, but is the seat arbitration friendly?

As Melnik and Harrison write, "[a]n obvious solution" to addressing jurisdictional concerns "is for parties to agree at the outset of a [smart contract] transaction where jurisdiction can be asserted for disputes."¹¹⁸

Seated in Alabama – Set in Cyberspace

While Kleros is compliant with the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards, it has no "default" system of local jurisdictions chosen. This is because Kleros aims to provide a "global and real time adjudication technology"¹¹⁹ applicable anywhere. If parties have chosen to arbitrate

under the Alabama Arbitration Act, the fact that the arbitration takes place in "cyberspace" should be immaterial. As the Alabama State Supreme Court has determined, the fact that the arbitration does not take place within the state does not affect the binding of the arbitrator's decision when the dispute is reduced to an Alabama award.¹²⁰

3. The Validity and Arbitrability of the Subject-Matter of the Smart Contract

Under this issue raised by Shehata, parties to smart contract based arbitration should "ensure that the subject matter of their smart contract is arbitrable under the law of the seat of arbitration."¹²¹ This is due to the fact that failure "to investigate whether such a subject matter is valid under the law of the seat of arbitration and also under the law applicable to the merits... could deem the arbitration process entirely useless."¹²²

In Alabama, while "questions of substantive arbitrability are for the courts,"¹²³ the answer to the question of arbitrability is typically "determined by the contract entered into by the parties."¹²⁴ Therefore, the Alabama Supreme court has held that "[a] trial court may not order arbitration of the issue of arbitrability except upon ""clear[] and unmistakabl[e]" evidence" that the parties agreed to arbitrate that issue."¹²⁵ This evidence can be such as "the clear and unambiguous language of the arbitration agreement itself."¹²⁶ Therefore, Alabama courts will look at "the clear and plain meaning of the terms of the contract" in order to ascertain the intention of the parties' intent as the courts will presume, they "intend[] what the terms clearly state."¹²⁷

Furthermore, Alabama courts are seemingly loath to overturn an arbitration award once granted by the terms of the agreement. The Alabama Arbitration Act has "the limited grounds [of] fraud, partiality, or corruption"¹²⁸ to void an award if the

arbitration agreement arises post-dispute. But the Alabama Supreme court has held, these "grounds do not provide adequate review of arbitrators' decisions in the numerous and varied commercial-and consumer-transaction disputes now being channeled to arbitration in this State through predispute agreements for arbitration."¹²⁹

Thus, in pre-dispute commercial arbitration agreements, the Alabama Supreme court has held that pre-dispute agreements involving interstate commerce must apply the FAA's perhaps higher standard of "manifest disregard for the law"¹³⁰ to void an arbitration agreement. The Alabama Supreme Court has found "the most succinct statement of the [manifest disregard for the law standard] to be"¹³¹ that "a party ... must establish that (1) the arbitrators knew of a governing legal principle yet refused to apply it or ignored it altogether, and (2) the law ignored by the arbitrators was well defined, explicit, and clearly applicable to the case."¹³²

Arbitrability and the Blockchain

A blockchain based arbitration platform such as Kleros, can be applied to cases typically falling under existing court systems or cases that parties would find too expensive or time consuming to pursue under traditional dispute resolution methods. For example, a simple website dispute in which a client is not satisfied with the work of a freelance programmer where the total dispute would be less than attorney's fees. Additionally, in e-commerce if a party purchased a product from a new website but later needed to dispute the quality of the product and wanted a refund.¹³³ These current smaller disputes would not generally run a risk of complex issues of law as they would be more fact based and supported by less complex evidence. But if there were to be an issue of application of the law, Kleros has safeguards in place for selection of arbitrators through "candidate self-selection and sortition."¹³⁴ While arbitrators on the Kleros system are not required to prove identity, the alignment of the cryptoeconomic incentive of the Schelling point

(discussed below) induces perspective arbitrators to take cases in which they would have specialized knowledge so as to earn their arbitration fee.¹³⁵

4. The Capacity of the Parties to Enter Into the Smart Contract

Each party should ensure the other has the capacity to enter into an arbitration agreement or otherwise it could be considered invalid, as Shehata warns, because “capacity is usually determined by the law of domicile of each party ...”¹³⁶

In Alabama, as in other U.S. states, a minor lacks the capacity to contract. But unlike many other U.S. states, in Alabama the “disabilities of nonage”¹³⁷ varies under certain personal circumstances.¹³⁸ An unmarried individual must be over the age of 19 years-of-age to legally contract, while a married individual need only be over 18 years-of-age. Thus, the age a party may need to be to qualify as of “the age of majority” should be specifically addressed during negotiation between the parties because of Alabama's unique law regarding majority status for contracting.

In the Kleros platform, the arbitration procedure “would not commence until the smart contract receives pre-determined evidence of mutual unequivocal consent of the parties to arbitrate and if the subject matter of their dispute fits into the Kleros platform.” Thus, this unique “incapacity to make a binding contract”¹³⁹ would need to be addressed in the natural language version of the contract (Ricardian or otherwise) and in the smart contract when the arbitration agreement is drafted. This is certainly an opportunity for local practitioners to provide their expertise.

5. The Law Applicable to the Merits of the Dispute

Shehata recommends that “parties to smart contracts should choose the same jurisdiction for the seat of arbitration and the law applicable to the merits of the dispute.”¹⁴⁰ Shehata currently recommends the jurisdictions of Arizona, Tennessee, and Delaware as he finds they “are currently considered the friendliest jurisdictions for legal enforcement of smart contracts.”¹⁴¹

In the area of commercial arbitration, the Alabama Supreme Court follows the most liberal federal policy where “short of authorizing trial by battle or ordeal or, more doubtfully, by a panel of three monkeys, . . . parties are as free to specify idiosyncratic terms of arbitration as they are to specify any other terms in their contract.”¹⁴²

Procedural Law of the Alabama Arbitration Act on the Blockchain

Under the procedural law of the Alabama Arbitration Act section 6-6-4, it is the general duty of arbitrators “to appoint a time and place for hearing” and, unless there is a continuance, give the parties three days’ notice before hearing and making their award.”¹⁴³ Under Alabama case law, parties are entitled to be present when testimony is being produced.¹⁴⁴ But this stricture would not be encountered in arbitrations dealing only with documents such as those currently envisioned on the Kleros platform. On the Kleros platform evidence is such as the plain English contract and other documents sent by the party instigating the arbitration through secured public key cryptography.¹⁴⁵

Under § 6-6-4, arbitrators “must make their award in writing, which must be signed by them and a copy ... delivered to each of the parties... their agents, or attorneys and the fact and date of such delivery endorsed on the original.”¹⁴⁶ Here, the Kleros platform considerably achieves this measure. Once the arbitrators commit their vote, they must provide a written final decision which is produced to the parties through the Kleros system.¹⁴⁷ Further, the arbitrators must provide “justification for

their decision" which cannot be changed once made."¹⁴⁸ Unless an appeal is taken, the cryptocurrency held in escrow by the smart contract is distributed to the winning party.

Ultimately, while other states may be in the lead in smart contract legislation, overcoming gaps with other states may not be such a great hinderance for developing local expertise. For many basic functions of smart contract drafting, "text templates can be created and used to indicate what parameters need to be entered and how those parameters will be executed."¹⁴⁹ However, confirming "that the underlying code actually will perform the functions specified in the text... will require a trusted third party with programming expertise."¹⁵⁰ Thus local practitioners should begin investigating and becoming familiar with platforms such as Kleros to ensure they are future proofing their skills.

6. The Number of Arbitrators

It is recommended parties take regard of the number of arbitrators as "the number of arbitrators could be considered a public policy issue at the seat of arbitration."¹⁵¹ Shehata notes that "parties in international arbitration are usually allowed to choose their arbitrators."¹⁵² Further, he recommends avoiding "an even number of arbitrators as this could be considered to be in violation of various arbitration laws around the world."¹⁵³

The three most commonly used arbitration institutions in the US; the American Arbitration Association (AAA); the International Institution for Conflict Prevention and Resolution (CPR); and the Judicial Arbitration and Mediation Services (JAMS) have a default number of arbitrators when there is no express agreement between the parties. The AAA¹⁵⁴ and JAMS¹⁵⁵ use as default of one arbitrator. CPR requires one arbitrator where the claim does not exceed \$3 million, (exclusive of interest or costs) but CPR may "in its discretion" "due to the complexity of the case or other considerations" appoint three arbitrators.¹⁵⁶

Number of Arbitrators Under the Alabama Arbitration Act and on the Kleros Platform

Under section 6-6-5 of the Alabama Arbitration Act, a mere majority vote of arbitrators is required.¹⁵⁷ But under this section if any of the arbitrators fail to attend the arbitration other arbitrators may be substituted if the parties agree, or the arbitrators themselves may appoint alternates. If an alteration is made by the arbitrators, a memorandum must be noted.¹⁵⁸ Thus, as previously discussed, Alabama allows for much flexibility on this issue in arbitration which can be utilized by the Kleros arbitration platform.

The Kleros system selects arbitrators from a pool of individuals who have “staked” or submitted into the system an amount of Kleros’s local cryptocurrency token Pinakion (discussed below). The more Pinakion a potential arbitrator deposits into the system “the higher the probability that [the arbitrator] will be drawn.¹⁵⁹ Potential arbitrators “that do not deposit pinakions do not have the chance of drawn.”¹⁶⁰ Thus, inactive arbitrators cannot be selected. Further, parties to the Kleros arbitration agreement, can select a “timed vote” which can be modified in the parameters of the selected Kleros subcourt.¹⁶¹

Thus, under the Kleros system aspects such as arbitrator selection, timeframe for award, and posting of results and memorandum are automated around the human arbitrator’s decision. This brings efficiency to the arbitration process as the parties and arbitrators can act in a distributed manor while ensuring a more impartial and fair result.

7. The Technical Qualifications of the Arbitrators

Shehata recommends ensuring “arbitrators who possess the technical knowledge to adjudicate the smart contracts disputes”¹⁶² are chosen as this will ensure parties

receive the actual benefit of blockchain based arbitration. Under the Alabama Arbitration Act, parties are given great liberty regarding who may arbitrate their dispute.

Under the Alabama Arbitration Act parties are free to appoint whomever they wish as an arbitrator. The only statutory requirement on the arbitrator's qualifications is found in Code of Alabama § 6-6-6. This section states "arbitrators must be sworn impartially to determine the matters submitted to them, according to the evidence and the manifest justice and equity of the case, to the best of [the arbitrators'] judgment and without favor or affection"¹⁶³ If more than one arbitrator is chosen, the oath may be administered by one of them to each other or "may be administered to them by any officer authorized to administer oaths."¹⁶⁴ Despite even this meager requirement on the qualifications of arbitrators under the Alabama Arbitration Act, "it has been ruled, however, that the necessity for an oath may be waived"¹⁶⁵ by agreement of the parties. This is because the Alabama Supreme Court has reasoned , § 6-6-6, "as a part of Alabama's arbitration scheme ... may or may not be a prerequisite to judicial enforcement of an arbitration award in Alabama."¹⁶⁶ Either way, it has been held § 6-6-6, is "certainly not a limitation on the parties' right to bargain for something different"¹⁶⁷ because "the Supreme Court of Alabama held that the oath could be waived, thus indicating freedom of contract by the arbitrating parties."¹⁶⁸

Cryptoeconomics and Game Theory to Provide Impartiality on the Blockchain

Whether or not parties may waive an oath requirement, blockchain based arbitration platforms often provide for arbitrator impartiality through a system of what is newly termed "cryptoeconomics." As Werbach writes, "Cryptoeconomic security is the distinctive feature of public blockchain networks."¹⁶⁹ Further, he states, this security measure is achieved because "parties engaged in validation of the ledger are motivated through economic incentives."¹⁷⁰

The Kleros platform provides cryptoeconomic security through the “technologies of crowdsourcing, blockchain and game theory.”¹⁷¹ The game theoretic utilized by Kleros is based on the *focal point* or *Schelling point*.¹⁷² The Schelling Point model is “one way of choosing among different Nash equilibria... and asks whether any one of them is especially prominent.”¹⁷³ This idea was first principally applied theoretically to blockchain technologies by one of the founders of Ethereum, Vitalik Buterin in 2014.¹⁷⁴ The simple idea of the Schelling point utilizing cryptocurrency, is that a number of arbitrators have 1 SchellingCoin, and are asked a binary “Yes or No” question. Each person then stakes their 1 coin in order to secretly cast a vote that answers the question either “Yes or No.” Once all the arbitrators have cast their votes, the results are revealed. Arbitrators who voted as the majority are rewarded with 10% of their coins. Parties who voted differently from the majority lose 10% of their coins.¹⁷⁵ Thus, arbitrators are incentivized to vote how they expect the majority to vote, thus reaching a “truer” result.¹⁷⁶

Cryptoeconomics and Trust on the Kleros Platform

On the Kleros platform, instead of a Schelling coin, a token termed the Pinakion is used for the “monetary” incentive. The Pinakion (PNK) is an ERC-20 token, which means it is a fungible token. The ERC20 standard “defines a common interface for [smart] contracts implementing a token, such that any compatible token can be accessed and used the same way” within the Ethereum blockchain ecosystem.¹⁷⁷

The Kleros Pinakion performs two main functions in that it “[p]rotects the system against a sybil attack”¹⁷⁸ and, as discussed above, “[p]rovides an incentive for the jurors to act honestly and coherently.”¹⁷⁹ Thus, arbitrators on the Kleros platform “stake their PNK” to increase the “probability of being drawn as an [arbitrator] for a specific dispute ... proportional to the number of [PNK]” they put at stake.¹⁸⁰ The Kleros platform then utilizes a random number generator “to select the [arbitrators]

that will take the case."¹⁸¹ This system prevents arbitrators from pre-gaming any decision either amongst themselves or with a party, i.e. it is "bribe resistant."¹⁸²

While the methodology to prevent collusion between arbitrators and parties utilized by Kleros is not universal, it should be illustrative to practitioners in the United States and Alabama that through the use of new technologies such as blockchain, arbitration procedures of the future will operate much differently than the conference room face-to-face methods of the past.

8. The Confidentiality of the Contract Dispute

It is recognized that most arbitration "is not confidential by default."¹⁸³ Therefore, Shehata recommends that parties "should provide explicitly for the confidentiality of their dispute under the smart contract."¹⁸⁴ As the Alabama Center for Dispute Resolution notes, "Except in unusual circumstances, trials in the judicial system are open to the public, with the testimony and evidence becoming a matter of public record."¹⁸⁵ Thus, one of the advantages of ADR is that it "enables the parties to maintain confidentiality in the proceedings."¹⁸⁶

Under the Alabama Arbitration Act, there is no requirement that arbitration be kept confidential. Again, this would fall to the agreement of the parties. Further complicating the ability of parties to keep their contracts and arbitration confidential is the open distributed nature of a public blockchain (such as Ethereum and Bitcoin) which "contains a full and detailed record of every transaction processed using the system..."¹⁸⁷

The Kleros platform prevents information such as the natural language Ricardian contract and the arbitrator's voting option labels from being put on the blockchain. On the Kleros platform, only a hashed¹⁸⁸ version of the contract text is submitted through public key encryption. Each party is then able to verify the hash of the other

party to ensure they correspond and are the same. Thus, the Kleros system not only preserves confidentiality while allowing parties to arbitrate online, it provides a method to mathematically ensure the parties are submitting the same contract for dispute.

Here, local practitioners in the U.S. would be well served to begin investigating the process used to submit and cryptographically transform contracts over the blockchain. While one would not need to become a cryptographer, understanding these methods would serve clients and the legal practice as blockchain becomes more integrated into the lives and disputes of clients.

Conclusion

Technology forever moves forward and never allows anyone to be an expert for too long. Imagine, at the beginning of the 20th Century engineering students, fresh out of college, describing how – with new techniques and new materials – one day buildings may be a hundred stories high. They may have not been believed by the average person – and they may have been less believed by the experienced carpenters and masons of the day. But by 1931, there the Empire State Building stood. And today this marvel of engineering is no longer even among the top 25 tallest buildings in the world!

With the advent of legal-tech such as smart contracts and blockchain based arbitration, disputes that were once too expensive for parties to engage may now take place through technology. While this technology may enable more people direct access to justice, there will still be a need (and perhaps a growing need) for practitioners versed not only in the law, but the technology. Practitioners of Alabama arbitration law with the Kleros arbitration platform now, and in the future, have much more to offer potential clients.

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⁹³ See Ala. Code 1975, § 8-1-41(3), see *Custom Performance, Inc. v. Dawson*, 57 So. 3d 90, 94, 2010 Ala. LEXIS 154, 7 (Ala. August 27, 2010)

⁹⁴ see 9 U.S.C.S. § 1 et seq.,

⁹⁵ “generic language in an arbitration agreement indicating that the parties intended for their arbitration to be governed by “the laws of the State” would not preempt the FAA because the FAA is part of the arbitration laws of Alabama and can be applied to arbitration administered pursuant to the laws of Alabama.” *Robertson v. Mount Royal Towers*, 134 So. 3d 862, 2013 Ala. LEXIS 69 (Ala. 2013).

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¹⁰⁴ Because a contract attachment expressly incorporated by reference a manufacturer’s standard terms and conditions, which contained an arbitration provision, the arbitration provision was part of the contract; therefore, the trial court erred in denying the manufacturer’s motion to compel arbitration. *Advance Tank & Constr. Co. v. Gulf Coast Asphalt Co., L.L.C.*, 968 So. 2d 520, 2006 Ala. LEXIS 21 (Ala. 2006).

¹⁰⁵ *Tuskaloosa Bridge Co. v. Jemison*, 1859 Ala. LEXIS 30, 6-7, 33 Ala. 476, 479-480 (Ala. January 1, 1859).

¹⁰⁶ *Tuskaloosa Bridge Co. v. Jemison*, 1859 Ala. LEXIS 30, 6-7, 33 Ala. 476, 479-480 (Ala. January 1, 1859).

¹⁰⁷ see Ibrahim Shehata, *Smart Contracts & International Arbitration* 24 (November 24, 2018)

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¹⁰⁹ KLEROS HANDBOOK at 104.

¹¹⁰ KLEROS HANDBOOK at 31.

¹¹¹ see ALABAMA CENTER FOR DISPUTE RESOLUTION, *ALTERNATIVE DISPUTE RESOLUTION PROCEDURES IN ALABAMA WITH MEDIATION MODEL 26* (4th ed., 2015).

¹¹² KLEROS HANDBOOK at 30.

¹¹³ Ibrahim Shehata, *Smart Contracts & International Arbitration* 14 (November 24, 2018), <http://dx.doi.org/10.2139/ssrn.3290026m> (last visited April 21, 2019)., see also Ibrahim Mohamed Nour Shehata, *Arbitration of Smart Contracts Part 3 – Issues to Consider When Choosing Arbitration to Resolve Smart Contracts Disputes*, KLUWER ARBITRATION BLOG (August 30, 2018) <http://arbitrationblog.kluwerarbitration.com/2018/08/30/arbitration-smart-contracts-part-3/> (last visited April 21, 2019).

¹¹⁴ Laura Warren, *The Seat of Arbitration-Why is it so important?* (Sept. 18, 2011) CLYDE & Co, <https://www.clydeco.com/insight/article/the-seat-of-arbitration-why-is-it-so-important> (last visited April 21, 2019).

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- ¹¹⁹ KLEROS HANDBOOK at 27.
- ¹²⁰ see *Edmundson v. Wilson*, 108 Ala. 118, 19 So. 367, 1895 Ala. LEXIS 105 (Ala. 1895). “Where there was no pretense of an abuse of discretion and no objection raised as to the conveniences of time or place, and the parties appeared, the fact that the sitting occurred across the state line, did not have the effect to vitiate the arbitration award rendered, as an Alabama award.”
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- ¹²⁹ *Birmingham News Co. v. Horn*, 901 So. 2d 27, 46, 2004 Ala. LEXIS 152, 51 (Ala. June 11, 2004).
- ¹³⁰ see *Birmingham News Co. v. Horn*, 901 So. 2d 27, 2004 Ala. LEXIS 152 (Supreme Court of Alabama June 11, 2004, Released). Overruled in part by *Hereford v. D.R. Horton, Inc.*, 13 So. 3d 375, 2009 Ala. LEXIS 1 and *Horton Homes, Inc. v. Shaner*, 999 So. 2d 462, 2008 Ala. LEXIS 120 on unrelated matter of statutory time period for taking an appeal of an arbitrator's award.
- ¹³¹ *Birmingham News Co. v. Horn*, 901 So. 2d 27, 52, 2004 Ala. LEXIS 152, 71-72 (Ala. June 11, 2004).
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¹⁴⁷ KLEROS HANDBOOK at 35.

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