



Chamber of Digital Commerce
1667 K Street, N.W., Suite 640
Washington, D.C. 20006
policy@digitalchamber.org

“Smart Contracts” Legal Primer

Why Smart Contracts Are Valid Under Existing Law and Do Not Require Additional Authorization to Be Enforceable

January 2018

The term “smart contract” has entered the public consciousness following the rise to mainstream awareness of virtual currencies and blockchain technology. However, this term is frequently misunderstood and used incorrectly, creating unnecessary and potentially harmful confusion surrounding the application of U.S. law to smart contracts, and prompting states to attempt to clarify their position through legislation. The purpose of this document is to provide a plain language explanation of smart contracts and how they fit within existing law, demonstrating that further state legislation is unnecessary to support the growth of this industry.

Important takeaways from this document are:

- The term “smart contract” is itself imperfect. A smart contract is neither smart, nor is it necessarily a contract.
- A smart contract is computer code programmed to execute transactions based on pre-defined conditions.
- To the extent that smart contract technology is embedded with the terms of a legal contract, existing law and traditional legal analysis already apply and ensure efficacy.
- Specifically, the Electronic Signatures in Global and National Commerce Act (“ESIGN Act”) and the Uniform Electronic Transactions Act (“UETA”) currently provide sufficient legal basis for smart contracts embedded with the terms of a legal contract to be granted efficacy once it is electronically signed.
- Because existent laws already provide a sufficient legal foundation for the enforcement of these types of agreements, we believe additional legislation will only serve to create inconsistent state laws, confuse the marketplace, and potentially hinder innovation.

What’s a Smart Contract?

In the most basic terms, a smart contract is computer code that programmatically executes transactions in accordance with pre-defined terms. The term “smart contract” was first used by Nick Szabo in 1994 who proposed embedding computer code “in all sorts of property that is valuable and controlled by digital means”¹ to automate the execution of predetermined actions based on pre-programmed parameters. However, it wasn’t until the rise of Distributed Ledger Technology (“DLT”) and blockchain technology, that smart contracts could operate in an environment that also afforded transparent and independently auditable and verifiable records of their activity.

Is A Smart Contract Always A Legal Contract?

No. Because a smart contract is computer code, a smart contract may represent all, part, or none of a valid legal contract under U.S. law. Smart contracts function – in whole or in part – to give effect to legal contracts. Thus, smart contracts are the programmatic *means* by which some or all of the terms of the legal contract are performed. It is the underlying contractual terms that are given legal effect.

Do Existing Frameworks for Legal Contracts Apply to Smart Contracts?

Yes. Existing frameworks for legal contracts apply to smart contracts. Even in instances where the smart contract functions in its entirety as a legal contract, there is no need to treat it differently from any other legal contract. In the U.S., legal contracts are governed by state and federal common law, and statutory laws that govern certain types of contracts or contractual terms. There is no reason to believe that contracts processed, executed, or otherwise enforced via smart contract technology are not subject to these existing laws, just like any other contracts that use electronic technology to execute terms.

Examples of codified laws governing legal contracts include the Uniform Commercial Code (UCC), which governs commercial transactions and has been adopted in almost every state, or the UETA, which applies to transactions among parties who have “agreed to conduct transactions by electronic means.”ⁱⁱ

To the extent the existence of a legal contract overlaps with the existence of a smart contract, legal questions may arise as to the validity or enforceability of components to a contract that exist in a digital format. However, these questions have already been addressed by both federal and state law – specifically, the federal ESIGN Act,ⁱⁱⁱ and UETA which nearly all states have enacted.^{iv} The UETA and ESIGN Act generally give legal efficacy to electronic signatures, records, and contracts so long as the parties are provided with appropriate written notice and consent to conduct business electronically. Specifically, UETA and ESIGN ensure the following:

- If a law requires a signature, an electronic signature satisfies the law.
- If a law requires a record to be in writing, an electronic record satisfies the law.
- A contract, signature, or related record may not be denied legal effect or enforceability solely because it is in electronic form.
- A contract may not be denied legal effect solely because an electronic record was used in forming the contract.

Cryptographic signatures fall squarely within the definition of “electronic signature” set forth in UETA and ESIGN. Hence, if smart contract code is used to create or effect an electronic signature, electronic record, or electronic contract, then UETA and ESIGN ensure legal efficacy will apply. As a result, no new legal frameworks are needed to ensure the legal efficacy of signatures, records, or contracts that use smart contracts, and any attempt at new regulation that applies exclusively to smart contract technology in the forum of contract law would be duplicative and unnecessary.

Do Existing Laws Grant Efficacy to All Electronic Legal Records?

Not in all instances. For example, the ESIGN Act does not grant legal efficacy to electronic signatures or records for purposes of wills, codicils, testamentary trusts, official court documents, documents related to family law matters, or for certain legal agreements subject to the UCC. However, in many cases, these ESIGN-exempted records are given legal effect by other laws.

Conclusion

Existing legal frameworks for defining and giving legal effect to contracts cover smart contract technology. Additional laws are largely unnecessary and will only serve to confuse the application of current law.

ⁱ NICK SZABO, THE IDEA OF SMART CONTRACTS (1997).

ⁱⁱ UETA § 5(b).

ⁱⁱⁱ 15 U.S.C. §§ 7001 *et seq.*

^{iv} The states that have not enacted the UETA include New York, Washington, and Illinois, and each of those states have adopted alternative statutes which give legal effect to electronic contracts and signatures.