

MULTIDISCIPLINE PROCEEDINGS OF
**DIGITAL FASHION
CONFERENCE**

KOREA, REPUBLIC OF

Multidiscipline Proceedings of

DIGITAL FASHION CONFERENCE

December 2022 (*Volume 2, No.6*)

Copyright © 2021
By Woongjin Think Big Co., Ltd.
All rights reserved.
Available at digitalfashionsociety.org
Published:
서울 합정역
파주출판도시
ISSN 2466-0744
Seoul
Korea, Republic of

EDITORIAL BOARD

Katharina Sand

*PhD Candidate - Faculty of Communication, Culture and Society, USI -
Università della Svizzera italiana*

Alice Noris

*PhD Candidate - Faculty of Communication, Culture and Society, USI -
Università della Svizzera italiana*

Michela Ornati

*Faculty of Communication, Culture and Society, USI - Università della
Svizzera italiana*

ELSEVIER



SRN
Societal Research Network

Universal
Impact Factor



ISSUES OF REGULATION AND IMPLEMENTATION OF SMART CONTRACTS IN NATIONAL LEGISLATION

Nodirakhon Abdurakhmanova

Lecturer at Tashkent State University of Law
Tashkent, Uzbekistan
nodira2112@gmail.com

Abstract. This scientific article discusses the issues of the legal status of such innovations as smart contracts, blockchain, crypto assets and tokens. The article reveals the issues of legal regulation of relations arising in the course of drawing up and concluding smart contracts. Also, possible ways of their implementation in the legislation of the Republic of Uzbekistan are considered, the main problems that exist in the legislation and law enforcement practice in such implementation are discussed. In the course of the analysis of the legislation of the Republic of Uzbekistan, much attention is paid to the latest reforms in the field of digitalization of the economy and the main sectors of life, including the development of e-commerce and e-government. In the final part, possible ways to resolve the issue of introducing smart contracts in the Republic of Uzbekistan are considered and relevant proposals are given.

Key words: blockchain, smart contracts, crypto asset, digitalization

Introduction. One of the most pressing problems of modern legal regulation of contractual relations and the provision of public services in the Republic of Uzbekistan is the issue of protection of the parties from unscrupulous counterparties, ranging from partial or complete evasion of the performance of the subject of the contract, ending with prosecution for violations of the terms of the contract without loss of time to prove in court and to avoid incorrect (double) interpretation, and also from unfair actions and unjustified delays of civil servants in the provision of public services through the introduction and use of such an innovation as a smart contract (smart contract) based on Blockchain technology, which, when implemented, would significantly contribute to the accelerated development of the social institution of relations between people by raising their legal awareness to another level.

Because the topic of smart contracts is quite new, the issues of their legal regulation have been the subject of research by a small number of authors, among whom it should be highlighted: B. Dondero (B. Dondero)[11], N. Sabo (N. Sabo) [16], S. Andrews (S. Andrews) [15], M. Pennington (M. Pennington.)[14], N. Reiff (Reiff H), D.Posen (Posen D)[10]. They investigated the legal aspects of the application of smart contracts, assessed the readiness of the legislation of several countries for the implementation of smart contracts, as well the main differences between smart contracts and classical contracts. In addition, the issues of data protection of smart contracts, the possibilities of smart contracts for the industrial Internet of Things, the life cycle of the platform and smart contracts, and the use of smart contracts were considered in the works of such authors as K. Levi (Levi K.) [13], Z. Zeng (Zheng Z.), Sh. Xia (Xia Sh.), H. Dai (Dai And N.), W. Chen (W. Chen), H. Chen (Chen H.), Y. Weng (J. Weng) M i. Imran (M Imran.) [19].

The purpose of this article is to substantiate the legal nature of smart contracts, and foreign experience in this industry and to develop ways to introduce smart contracts into the current legislation of the Republic of Uzbekistan, as well as to assess the effectiveness of such implementation.

Material and methods of research. In the process of conducting the research and writing the article, structural-logical, comparative-legal, statistical, descriptive, system-structural, as well as dialectical methods of scientific cognition, collection, and analysis of scientific and practical material were applied.

Results and their discussion.

Since the end of 2016, the Republic of Uzbekistan has become active, in several innovations such as e-government, and e-commerce and has even become a pioneer. Also, by the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan "On measures to organize the activities of the Public Services Agency under the Ministry of Justice of the Republic of Uzbekistan", public services were introduced, the number of which has exceeded 150 today, starting from obtaining a TIN, ending with the registration of ownership of the real estate and obtaining cadastral documents.

During the next annual address to the Parliament of the Republic of Uzbekistan on January 24, 2020, President Shavkat Mirziyoyev noted that in 2020 the country should make a radical turn in the development of the digital economy. Of the 14 main points of this message, I would like to highlight the fact that the main emphasis was placed on the need for full digitalization of the construction, energy, agriculture and water management, transport, geology, healthcare, education, cadastral and archival affairs.

The Decree of the President of the Republic of Uzbekistan "On the approval of the strategy "Digital Uzbekistan-2030" and measures for its effective implementation" was also adopted, in which the need for the widespread introduction of modern information and communication technologies in all sectors and spheres, primarily in public administration, education, healthcare, and agriculture, was acutely discussed [1].

After the adoption of this regulatory document, many innovations were introduced regarding the digitalization of various industries, for example, in December 2020, the State Institution "Center for Digitalization of Agriculture" was established, whose activities are aimed at maintaining the Digital Agriculture information system in the agro-industrial complex, the introduction of e-commerce and artificial intelligence in the process of growing and selling agricultural products [2]. Also, this Center is engaged in creating technological conditions for the introduction of "Smart Agriculture" technologies.

In addition, since January 1, 2021, as an experiment within the framework of the integrated Digital Tashkent program, when forming an identification ID card when issuing an individual, a personal account of an individual was immediately formed to establish electronic relationships with government agencies and organizations.

In particular, since August 1, 2021, individuals and legal entities have been allowed to pay all established state duties, fees, fines, and other mandatory payments using electronic payment systems online.

Along with the above examples, today we can see many examples of the introduction of digital technologies in various sectors of life. All these innovations require, firstly, the improvement of the existing regulatory framework, and secondly, the adoption of new legislative acts regarding relations arising from the use of these technologies (which are considered new concerning our legislation) [5].

One such innovation is smart contracts. a smart contract is an agreement, the execution of which is automated. According to Nick Szabo, one of the pioneers in the analysis of automatic agreements with enforcement, a smart contract is an algorithm of computerized transactions that fulfills the terms of a contract, that is, it is a self-executing contract in which the terms of the agreement between the parties are directly spelled out in lines of code.

Classical contracts can exist in various forms, for example, in oral or written form.

Of course, the development of e-commerce has significantly increased the number of agreements concluded in electronic forms, the most striking examples of which are various click-processing agreements [4]. However, even in the case of conventional electronic contracts, some classic documents may be required, for example, invoices, receipts, or certificates, an invoice, especially when such electronic contracts are concluded for the supply or purchase and sale of individual goods and services. In some cases, the above documents are the only evidence of the existence of a contract concluded in electronic form. In contrast, smart contracts can exist only in electronic form, it is impossible to use any other form of contract or document flow with it (for example, an oral or written printout). It is also determined by the specifics of the subject of smart contracts: it can relate to certain digital assets (for example, cryptocurrency) or digital manifestations of autonomous assets, the ownership of which is registered in the Blockchain. This distinguishes a smart contract from most of the so-called existing "electronic contracts".

As described above, smart contracts differ from existing electronic contracts, which is why there is a question of ways to regulate legislation in this area. World experience shows several models for integrating smart contracts into the country's legislation, namely the following:

The first model provides for the preservation of classic paper contracts or contracts concluded in other material forms, which are drawn up in Russian or another human language, whereas smart contracts will be just an addition to them, that is, a certain part of the contract will be translated into computer language and presented in the form of a smart contract [17].

In this integration model, a smart contract will not be part of a legal contract but will be a technical tool using which the contract will be automatically executed. Most likely, when choosing this model, contradictions between the code of a smart contract and the text of a classic contract are inevitable, since not all legal terms can be translated into computer language, and it is also necessary to take into account that a classic contract is drawn up by lawyers, while a smart contract is prepared by programmers. In such cases, the text of the classical contract will have an advantage over the computer code.

With this model, it is possible to formulate an approximate legislative definition of a smart contract in the following form:

"A smart contract is a computer program recorded in a distributed registry and providing automatic fulfillment of contractual obligations or other legally significant actions" [7].

But at the same time, it should be emphasized that entering data into the distribution register of information about a smart contract is unprincipled in a separate integration model.

Since, in this model, a smart contract will not be part of a legal contract or recognized as such, thus without signing a classic paper contract, a smart contract will not have any legal consequences. In the model under consideration, a smart contract will be recognized as a method of execution rather than a contract [8]. In this case, there is no need to radically change the legislation regarding the smart contract, it is necessary to make additions in the form of a definition of a smart contract and its role in contractual legal relations.

The second integration model is a hybrid model of smart contract integration. In this integration model, some of the contracts that can be reflected in the programming language will be concluded in the form of smart contracts, and the rest of the contracts will be drawn up in a classic form, before the possibility of their translation into computer code is not developed. For example, purchase and sale, insurance, and supply contracts can already be concluded in the form of smart contracts, at the same

time, for storage and consulting contracts, it is necessary to translate the method of their conclusion and control into the electronic form [12].

Such contracts will be automatically executed and recognized as proof of the establishment, modification, or termination of civil rights and obligations. They will be signed with an enhanced qualification signature and recognized at the level of a paper contract in any situation, except in cases where interference with the computer code of third parties is proved [6].

One of the solutions within the framework of this model can be called legal contracts, the terms of which will be supplemented by a kind of referral links to standardized operational parameters existing within a certain network, which will be a kind of intermediary between legal norms and program code [9].

Thus, before using smart contracts, it is necessary to give them legal status in the legislation of Uzbekistan and give them a legal definition. In this case, lawyers, and legal experts will need to choose one of the following: "Whether to recognize a smart contract as a separate type of contract or equate it to one of the forms of the contract?"

If the smart contract is recognized as a new form of contract, and not an independent type of contract, then cardinal changes are not required.

Whereas, if you give the status of a smart contract as a separate type of contract, then it will be necessary to implement and resolve the above issues [18].

After giving the official status, it is necessary to choose a model for the implementation of smart contracts in the legislation of Uzbekistan (a separate integration model or a hybrid model for the integration of smart contracts). In this case, if you choose a separate model, the classic paper contracts will retain their place in business turnover and will not undergo changes, and the smart contract will only be an addition to them, which will reflect part of the contract in terms of execution, and all essential conditions will be specified in the classic contract. In this model, a piece of code will not be part of a legal contract, but will only be a technical means to ensure the automatic fulfillment of the obligation. In this case, in the event of a contradiction between the computer program executing the contract and what is written in the terms of the contract, the scenario described in the classic contract will prevail. But, in our opinion, this will lead to an increase in costs (since it will be necessary to duplicate the contract in the form of a paper contract and a smart contract), and will also lead to an increase in disputes regarding contradictions between the terms of the contract and the smart contract. Thus, the goal expected from the introduction of smart contracts will not be achieved - optimization of the process of concluding and executing contracts, eradication of corruption, reduction of queues in government agencies, reduction of costs, and probable losses during the execution of contracts.

Conclusions. Based on the above, we can come to the following conclusions. It is necessary to give legal status to smart contracts in the legislation of Uzbekistan and give them a legal definition. In this case, lawyers, and legal experts will need to choose one of the following: "Should a smart contract be recognized as a separate type of contract or equate it to one of the forms of the contract?"

If a smart contract is recognized as a new form of contract, and not an independent type of contract, then cardinal changes are not required. Whereas, if you give the status of a smart contract as a separate type of contract, then it will be necessary to implement and resolve the issue of implementation.

After giving the official status, it is necessary to choose a model for the implementation of smart contracts in the legislation of Uzbekistan (a separate integration model or a hybrid model for the integration of smart contracts). In this case, if you choose a separate model, the classic paper contracts will retain their place in business turnover and will

not undergo changes, and the smart contract will only be an addition to them, which will reflect part of the contract in terms of execution, and all essential conditions will be specified in the classic contract. In this model, a piece of code will not be part of a legal contract, but will only be a technical means to ensure the automatic fulfillment of the obligation. In this case, in the event of a contradiction between the computer program executing the contract and what is written in the terms of the contract, the scenario described in the classic contract will prevail. But, in our opinion, this will lead to an increase in costs (since it will be necessary to duplicate the contract in the form of a paper contract and a smart contract), and will also lead to an increase in disputes regarding contradictions between the terms of the contract and the smart contract. Thus, the goal expected from the introduction of smart contracts will not be achieved - optimization of the process of concluding and executing contracts, eradication of corruption, reduction of queues in government agencies, reduction of costs, and probable losses during the execution of contracts.

Based on the above, it is recommended to introduce a hybrid model for integrating smart contracts into the legislation of Uzbekistan. In this case, part of the contracts that can be written in the programming language will be concluded in the form of smart contracts, and the other part, before finding ways to translate them into the programming language, will be drawn up in the form of classical contracts. In this case, those contracts that will be drawn up in the form of smart contracts will be automatically executed and will not be duplicated in paper or another material form. This model assumes the creation of new legislative acts concerning smart contracts and amendments to existing regulatory legal acts in order for smart contracts to be recognized as a type of contract and serve as proof of the establishment, modification, or termination of civil rights and obligations.

References:

1. Decree of the President of the Republic of Uzbekistan on the approval of the strategy "Digital Uzbekistan-2030" and measures for its effective implementation // National Database of legislation, 06.10.2020, No. 06/20/6079/1349
2. Resolution of the Cabinet of Ministers of the Republic of Uzbekistan "On measures for the development of the digitalization system in the agro-industrial complex and agriculture of the Republic of Uzbekistan" // National Database of legal documents, 18.12.2020, No. 20.09.794/1655
3. Бобур М. ПРАВОВАЯ ОХРАНА ОБЪЕКТО В ИНТЕЛЛЕКТУАЛЬНОЙ СОБСТВЕННОСТИ-ЗАЛОГ РАЗВИТИЯ ПРЕДПРИНИМАТЕЛЬСКОЙ ДЕЯТЕЛЬНОСТИ // Review of law sciences. - 2020. - Т. 2. - №. Спецвыпуск. - С. 90-96.
4. Мукумов Б. Перспективы развития модели "Умного регулирования" // Современные тенденции развития цифровизации в сфере юстиции. - 2022. - Т. 1. - №. 1. - С. 75-78.
5. Рахмонова М. Проблемы правоприменительной практики защиты прав на товарные знаки и возможные пути их разрешения // Review of law sciences. - 2020. - Т. 2. - №. Спецвыпуск. - С. 97-104.
6. Рахмонова М. Проблемы правоприменительной практики защиты прав на товарные знаки и возможные пути их разрешения // Review of law sciences. - 2020. - Т. 2. - №. Спецвыпуск. - С. 97-104.
7. Тюльканов А. Смарт-контракты - договоры или технические средства? // 2017. URL.: https://zakon.ru/blog/2017/4/7/smart-kontrakty__dogovory_ili_tehnicheskije_sredstva (дата обращения: 05.10.17)

8. Abdixakimov, I., 2022. Cyber Crimes in Digital Economy. Elita. uz-Elektron Ilmiy Jurnal, 1(1), pp.1-5.
9. Christopher D. Clack, Vikram A. Bakshi, Lee Braine. Smart Contract Templates: foundations, design landscape and research directions// 2016. URL.: <https://arxiv.org/pdf/1608.00771.pdf>, p.8 (дата обращения: 05.10.17)
10. David Pozen, Self-Help and the Separation of Powers, Yale Law Journal, Vol. 124, pp. 2-90, 2014, electronic resource: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2440991, last entrance: 29.02.2020
11. Dondero B. "Smart contracts", pacte d'actionnaire et droit de preemption // URL: <https://brunodondero.com/2016/03/13/smart-contracts-pacte-d'actionnaires-et-droit-de-preemption/> (last seen: 15.03.2019).
12. Legeais D. Cr?dits et titres de cr?dit // Revue trimestrielle de droit commercail et de droit conomique. - 2016. - Octobre-d?cembre. - P. 825-832.
13. Levy Karen, Book-Smart, Not Street-Smart: Blockchain-Based Smart Contracts and The Social Workings of Law, 14.02.2017, electronic resource: https://www.researchgate.net/publication/313843942_Book-Smart_Not_Street-Smart_Blockchain-Based_Smart_Contracts_and_The_Social_Workings_of_Law, last seen: 20.12.2022
14. Matthew Pennington, Blockchain Technology and Smart Contracts set to revolutionise the Legal Sector - Part Two, 31.07.2017, electronic resource: <https://medium.com/lawtech/blockchain-technology-and-smart-contracts-set-to-revolutionise-the-legal-sector-part-two-f9cc194401dd>, last seen: 04.03.2020
15. Stefan Andrews, In 1st century A.D., Hero of Alexandria designed the first vending machine-it dispensed holy water after insertion of a coin, 13.04.2018, electronic resource: <https://www.thevintagenews.com/2018/04/13/first-vending-machine/>, last seen: 04.03.2020
16. Szabo N., Smart contracts in Essays on Smart Contracts, Commercial Controls and Security, 1994, electronic resource: <http://www.fon.hum.uva.nl/rob/Courses/InformationInSpeech/CDROM/Literature/LOTwinterschool2006/szabo.best.vwh.net/smart.contracts.html>, last seen: 04.03.2020
17. To'Raqulova N. BLOKCHEYN TEXNOLOGIYASI TUSHUNCHASI VA UNING HUQUQIY MAQOMI //Central Asian Academic Journal of Scientific Research. - 2022. - T. 2. - №. 5. - C. 668-680.
18. To'Raqulova N. MUALLIFLIK HUQUQI OBYEKT LARI MUHOFAZASINI TA'MINLASHDA BLOKCHEYN TEXNOLOGIYASINING AHAMIYATI //Central Asian Research Journal for Interdisciplinary Studies (CARJIS).- 2022.- T.2.- №.5.- C. 290-300.
19. Zibin Zheng, Shaoan Xie, Hong-Ning Dai, Weili Chen, Xiangping Chen, Jian Weng, Muhammad Imran, An overview on smart contracts: Challenges, advances and platforms, 20.06.2019, electronic resource: <https://www.sciencedirect.com/science/article/pii/S0167739X19316280>, last seen: 20.12.2022