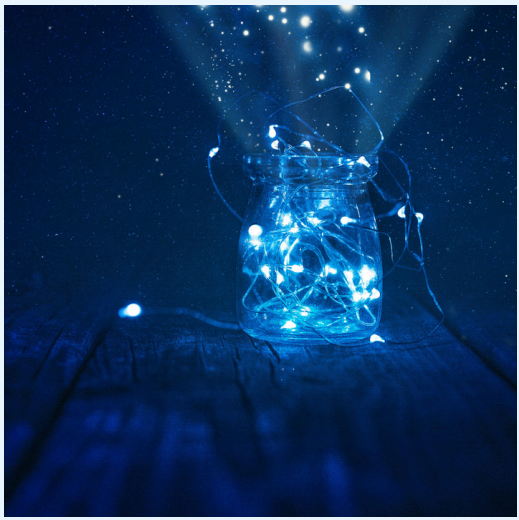
The Global Good:
the future of culture, creation, and author



unesco
Кафедра

ВЫСШАЯ • ШКОЛА • ЭКОНОМИКИ

FOREWORD

by Mariia Katkova

As the first quarter of 21-st century has passed, it is time to sum up everything that has passed and try to predict our common future. It is widely known that the world has stepped into the epoch of instability and polycrisis, and culture is not an exception.

At MONDICULT 2022 culture was recognized as the global good. Also culture is now regarded as a new asset at the market, intangible and immaterial, but as precious as the material ones. Still it is one of the oldest phenomena in human history, it is dynamic. Nowadays this dynamic depends on technology more, than ever, and this marks a huge challenge for culture and for humanity.

Culture cannot exist without an author, named or unnamed, and the author, who can only be a human being, receives both the benefits and the damage. As the technologies develop, especially artificial intelligence (AI) models they affect both the culture and the author, even if the terms of who carries the authorship, while AI comes into play. It may be found in different areas from cultural heritage and patents to fashion and professional activities, and in each sphere it brings crucial changes.

This compendium tries to look at culture, authorship and technologies, particularly AI from different points if view. The articles for it were prepared by the graduate students of the Faculty of Law at HSE University during their professional internship at the UNESCO Chair in Copyright, Neighbouring, Cultural and Information Rights under supervision of Mariia Katkova, Assistant Director and Lecturer.

TOKENIZATION AS A TOOL FOR ENSURING THE AUTHENTICITY OF CULTURAL HERITAGE PROPERTIES IN THE DIGITAL AGE

Digital technologies offer different opportunities to humanity, and it is also important in the field of cultural heritage preservation, including UNESCO designated sites. Tokenization seems to be one of the instruments to save and conserve cultural objects.

by Ravschan Idrisov

The protection of cultural heritage in the twenty-first century faces escalating threats to the material and historical integrity of monuments. As of March 2026, the UNESCO World Heritage List includes 1,248 properties [1]. Of these, 53 are inscribed on the List of World Heritage in Danger [2].

International practice in recent years demonstrates the scale of these risks. Between 2015 and 2017, properties within the ancient city of Palmyra [3], inscribed on the World Heritage List, were destroyed or severely damaged. In 2012, the mausoleums of Timbuktu were destroyed [4]. The historic monuments of Mosul sustained significant damage [5]. The 2019 fire at Notre-Dame Cathedral in Paris demonstrated the practical value of the prior creation of a digital copy through laser scanning (LiDAR technology) for the subsequent reconstruction of damaged elements [6].

Yet despite the importance of creating digital copies of monuments and archives, no adequate mechanism exists to ensure the immutability and traceability of such data. A digital twin records the state of a property at a particular moment but does not guarantee the preservation of a sequential history of changes – restoration interventions, reconstructions or adjustments. At the same time, a method capable of tracing the full trajectory of a property's transformations is of fundamental importance for assessing authenticity.

The question thus arises: can tokenization – understood not as a commercial practice involving digital assets but as a mechanism for assigning a unique digital identifier and recording versions in a distributed system – be integrated into the international legal regime

for the protection of cultural heritage as a tool for data preservation and change tracking? And if so, can it strengthen the procedural dimension of the principle of authenticity without substituting for the material basis of the property or undermining the public-law nature of the World Heritage regime?

The international legal regime for the protection of cultural heritage is built around the idea of its universal value and the collective responsibility of States. Its normative foundation is the Convention concerning the Protection of the World Cultural and Natural Heritage of 1972 (hereinafter the 1972 Convention), which establishes the duty of ensuring the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage [7]. This formulation gives the obligation an intergenerational character and places it beyond current State policy.

The principle of authenticity occupies a central place in the system of protection and is one of the conditions for confirming Outstanding Universal Value. Although the 1972 Convention does not contain a direct definition, the Operational Guidelines for the Implementation of the World Heritage Convention (hereinafter the Operational Guidelines) assess authenticity according to the ability of attributes to credibly convey value [8]. The normative development of the principle is articulated in the Venice Charter of 1964 and the Nara Document on Authenticity of 1994 (hereinafter the Nara Document), which substantially expanded the understanding of authenticity to include not only materials and form but also use, traditions, location, spirit and feeling [9].

The principle of integrity operates in parallel, requiring the preservation of all elements necessary to express Outstanding Universal Value, including the historical, cultural and natural context of the property. On closer examination, however, a structural gap emerges: international instruments require the documentation of interventions and their assessment for compliance with the stated principles, yet they do not establish a mechanism to ensure the immutability of such documentation. Interventions and their outcomes are recorded in reports and archival materials whose

storage depends on national systems. This creates a gap between the normative requirement of documentation and the practical ability to trace the history of changes to a property over time.

The development of the principle of authenticity is inevitably linked to the evolution of conservation tools. In the twenty-first century, the concept of "conservation" has expanded through digital technologies. The normative expression of this transformation is the Charter on the Preservation of the Digital Heritage of 2003 (hereinafter the 2003 Charter), which recognizes digital resources as part of humanity's heritage and obliges States Parties to ensure their long-term preservation [10]. Although the 2003 Charter was originally oriented towards born-digital objects, its principles lend themselves to an expansive reading that extends to digitized copies of tangible heritage.

Practical implementation of these provisions is reflected in UNESCO projects. The Dive into Heritage platform creates three-dimensional models of World Heritage properties accompanied by metadata and licensing agreements [11]. CyArk undertakes similar work, specializing in high-precision 3D documentation [12]. Following the destruction at Palmyra and the fire at Notre-Dame, it was precisely these pre-existing digital copies that enabled damage assessment and the preparation of restoration projects.

From a technical standpoint, tokenization is the process of assigning a unique identifier to a digital object and recording information about it in a distributed data storage system. Such an identifier is accompanied by a version history, timestamps and cryptographic hashes that confirm the immutability of each entry [13].

In the heritage context, the functional purpose of tokenization is to ensure the immutability and traceability of data on the state of a property and its transformations. Each stage of change – restoration, reconstruction, adjustment of model parameters or addition of metadata – receives its own timestamp and is preserved in the system, precluding retrospective alteration.

Practical implementation of the mechanism involves defining trigger events that prompt the recording of a new version. These include any conservation or restoration intervention (before and after), damage to

the property as a result of armed conflict, natural disaster or other emergency, as well as planned recording within cycles of periodic reporting and State of Conservation reports. Such periodicity aligns with UNESCO's existing monitoring procedures and does not require the creation of an entirely new system [14].

A distinct question concerns the boundaries of the tokenizable object. UNESCO consistently adheres to the principle of the indivisibility of the monument and its context – historical, cultural and natural surroundings [15]. In the protection of archaeological properties, this is expressed, inter alia, in the creation of three-dimensional models of artifacts in situ, without physical relocation. In this connection, the mechanism of digital traceability can potentially extend not only to the structure of the monument itself but also to data on associated finds and spatial context. A promising direction is the extension of tokenization to historical documents directly linked to the property – architectural drawings, restoration reports from past eras, cartographic materials – which themselves constitute primary sources on their original state.

At the same time, a fundamental limitation of this approach must be acknowledged. The phenomenological dimension of authenticity – the unique "aura" of the property, its emotional and sensory connection with the historical context – does not lend itself to digital recording in any form. Tokenization deals with verifiable data on condition and transformations, but not with what makes an encounter with the monument an irreplaceable experience [16].

In the fight against illicit trafficking in cultural property, tokenization can also perform an additional function. Assigning a unique digital identifier to a model or archival record makes it possible to confirm the date of documentation creation, establish the sequence of updates and reduce the risk of falsification. This is particularly relevant for archaeological objects and museum collections. However, two levels of application must be distinguished. In inter-State restitution disputes concerning collections from the colonial period, the problem usually lies not in the absence of documentation: the facts are known, and the obstacle is political disagreement. The situation is different at the level of private transactions – thefts,

illegal excavations and sales of objects without verified provenance. It is here that immutable digital recording can strengthen the evidentiary base and raise the standard of verification in transactions [17].

The development of digital models and version-control mechanisms inevitably raises the question of their institutional integration. If tokenization is viewed as a tool for ensuring authenticity and fulfilling the intergenerational obligation of States Parties, its application must be embedded in the existing international legal framework for heritage protection. UNESCO, as the specialized agency of the United Nations responsible for coordinating international cooperation in the field of culture, plays the key role.

The creation of a single international platform to ensure the traceability of digital changes represents a logical development of the existing mechanisms for monitoring the state of conservation and periodic reporting. Integrating immutable digital recording into these procedures will enhance the transparency of reports and strengthen their evidentiary value. This mechanism is of particular relevance for properties inscribed on the World Heritage List relatively recently or those lacking a developed archival base of historical documentation.

Integration of the principle of digital traceability is best achieved through the development of additions to the Operational Guidelines. Such a recommendatory instrument should enshrine the concept of digital traceability as an element of compliance with Article 4 of the 1972 Convention [18], establish minimum standards for metadata and version control, define requirements for the scientific verification of digital models, and confirm the public character of digital representations of World Heritage properties. At the same time, a clear distinction must be drawn between impermissible commercialization – the use of a digital copy as an independently alienable asset – from legitimate paid access to digital archives as a means of financing conservation activities.

Particular attention must be paid to ensuring equal access for States Parties to the technological infrastructure. The international platform must not create dependence on private operators or exacerbate digital inequality. Otherwise, it would contradict the principle of

international solidarity enshrined in Article 6 of the 1972 Convention [19].

Thus, tokenization within the framework of a distributed archive is not an end in itself but a technological tool for the institutional safeguarding of collective memory. It can enhance the transparency and resilience of data storage, yet its introduction requires normative coordination and adherence to the principles of international solidarity. At the same time, it must be recognized that this approach covers only the verifiable, formalizable dimension of authenticity – the history of transformations, the composition of interventions, and the dynamics of the property's condition. Acknowledgment of this boundary does not diminish the practical value of tokenization but defines its precise place in the heritage protection system: not as a substitute for authenticity, but as the infrastructure for its preservation.

REFERENCES:

1. World Heritage List / UNESCO World Heritage Centre. [Electronic resource]. URL: https://whc.unesco.org/en/list/ (date of access 10.04.2026).
2. List of World Heritage in Danger UNESCO / World Heritage Centre. [Electronic resource]. URL: https://whc.unesco.org/en/danger/ (date of access 10.04.2026).
3. Damage assessment and report on the destruction at the Palmyra World Heritage Site / UNESCO World Heritage Centre. [Electronic resource]. URL: https://whc.unesco.org/en/news/1485 (date of access 10.04.2026).
4. Prosecutor v. Ahmad Al Mahdi — case concerning the destruction of cultural heritage sites in Timbuktu / International Crimes Database. [Electronic resource]. URL: https://www.internationalcrimesdatabase.org/Case/3321/Al-Mahdi-Case-/ (date of access 10.04.2026).
5. Revive the Spirit of Mosul / UNESCO [Electronic resource]. URL: https://www.unesco.org/en/revive-mosul (date of access 10.04.2026).
6. Gros, A., Guillem, A., De Luca, L., et al. Faceting the post-disaster built heritage reconstruction process within the digital twin framework for Notre-Dame de Paris // Scientific Reports. 2023. 13. 5981. (accessed 12 March 2026).
7. Convention concerning the Protection of the World Cultural and Natural Heritage, 1972, art. 4 / UNESCO World Heritage Centre [Electronic resource]. URL: https://whc.unesco.org/en/conventiontext/ (date of access 10.04.2026).
8. Operational Guidelines for the Implementation of the World Heritage 8. Convention, WHC.23/01, paras. 79–86 / UNESCO World Heritage Centre. [Electronic resource]. URL: https://whc.unesco.org/en/guidelines/ (date of access 10.04.2026).

9. The Nara Document on Authenticity, 1994, p. 13 / ENCoRE. [Electronic resource]. URL: https://encore-edu.org/wp-content/uploads/2023/09/The-NARA-document-on-authenticity.pdf (date of access 10.04.2026).
10. Charter on the Preservation of the Digital Heritage, 2003 / UNESCO. [Electronic resource]. URL: https://unesdoc.unesco.org/ark:/48223/pf0000229034 (date of access 10.04.2026).
11. UNESCO World Heritage Centre. Dive into Heritage / UNESCO World Heritage Centre. [Electronic resource]. URL: https://whc.unesco.org/en/dive-into-heritage/ (date of access 10.04.2026).
12. CyArk. Digital documentation of cultural heritage sites / CyArk. [Electronic resource]. URL: https://www.cyark.org/whatwedo/documentation (date of access 10.04.2026).
13. Collomosse, J., Bui, T., Cooper, D. et al. ARCHANGEL: Trusted Archives of Digital Public Documents / ArXiv. [Electronic resource]. URL: https://arxiv.org/pdf/1804.08342 (date of access 10.04.2026).
14. Operational Guidelines for the Implementation of the World Heritage Convention, WHC.23/01, paras. 169–176 / UNESCO World Heritage Centre. [Electronic resource]. URL: https://whc.unesco.org/en/guidelines/ (date of access 10.04.2026).
15. Operational Guidelines for the Implementation of the World Heritage Convention, WHC.23/01, paras. 88–95 / UNESCO World Heritage Centre. [Electronic resource]. URL: https://whc.unesco.org/en/guidelines/ (accessed 12 March 2026).
16. ICOMOS. Quebec Declaration on the Preservation of the Spirit of Place, 2008 / ICOMOS. [Electronic resource]. URL: https://www.icomos.org/images/DOCUMENTS/Charters/GA16_Quebec_Declaration_Final_EN.pdf (date of access 10.04.2026).

17. Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property, 1970, art. 3, 5 / UNESCO. [Electronic resource]. URL: https://www.unesco.org/en/legal-affairs/convention-means-prohibiting-and-preventing-illicit-import-export-and-transfer-ownership-cultural (date of access 10.04.2026).
18. Convention concerning the Protection of the World Cultural and Natural Heritage, 1972, art. 4 /_UNESCO World Heritage Centre. [Electronic resource]. URL: https://whc.unesco.org/en/conventiontext/ (date of access 10.04.2026).
19. Convention concerning the Protection of the World Cultural and Natural Heritage, 1972, art. 6 /_UNESCO World Heritage Centre. [Electronic resource]. URL: https://whc.unesco.org/en/conventiontext/ (date of access 10.04.2026).

Ravshan Idrisov is a final-year law student at the National Research University Higher School of Economics and a trainee-researcher at the UNESCO Chair on Copyright, Neighbouring, Cultural and Information Rights. His research interests include information law, copyright and neighbouring rights, digital law, legal philosophy and the history of political thought. He takes a particular interest in computer crime and the criminal-law response to offences involving cryptocurrencies and virtual assets.

The Global Good. The Future of Culture, Creation, and Author / ed. by Mariia Katkova. UNESCO Chair on Copyright, Neighboring, Cultural and Information Rights (HSE University), 2026. 88 p.

The compendium was made during the work experience intership of the 5th course students of the Faculty of Law at the National Research University “Higher School of Economics” at the UNESCO Chair on Copyright, Neighboring, Cultural and Information Rights. The intership was supervised by the Assistant Director Mariia Katkova. The layout of the compendium was made by Elizaveta Shigaeva.

© UNESCO Chair on Copyright, Neighboring, Cultural and Information Rights, 2026