

Committee on WIPO Standards (CWS)

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GLOBAL IDENTIFIER FOR NATURAL PERSONS AND LEGAL ENTITIES

Document prepared by the International Bureau

SUMMARY

1. The International Bureau presents the progress achieved on the global identifier pilot project since the last session. As the Phase 1 of the Pilot was completed in October 2023, the International Bureau shares the next steps for the project.

BACKGROUND

2. Identifying applicants or right holders across jurisdictions is a challenge experienced by many members of the IP community. To address this issue, in providing a better “quality at source” in relation to applicant names, WIPO Member States established the Name Standardization Task Force under the Committee on WIPO Standards (CWS) in 2017 at the fifth session of the CWS.

3. At its sixth session held in 2018, to clarify views and practices of Intellectual Property Offices (IPOs), the CWS agreed that the survey on the use of identifiers for applicants by IPOs be carried out and the result to be reported at its seventh session in 2019 (see paragraphs 169 to 170 of document CWS/6/34). According to the results of the survey conducted in both 2018 and 2019, many IPOs considered the use of a global identifier, commonly used across different jurisdictions, would be a desirable solution to deal with name standardization challenges.

4. To explore potential applications and opportunities provided by blockchain technologies in the existing IP ecosystem, the International Bureau prepared in 2021, in collaboration with IPOs and other stakeholders, a white paper on *Blockchain technologies and IP ecosystems*, which emphasized the potential importance of digital identity and global identifiers in IP community. The white paper is published on WIPO website at: <https://www.wipo.int/cws/en/blockchain-and-ip.html>.

5. At the tenth session of the CWS, held in 2022, several IPOs shared presentations on their blockchain related activities. The CWS noted that the International Bureau had launched a blockchain pilot for global (digital) identifiers, which was planned as being comprised of two Phases. (See paragraphs 63 and 64 of document CWS/10/22.)

6. At the same session of the CWS, the Delegation of Saudi Arabia presented a proposal for establishing an international database to standardize applicant names. Some delegations noted that the proposal involved more than just technical issues, with legal and policy issues also needing to be addressed. Due to the large potential impact on applicants and other stakeholders, those groups should also be actively involved in the process of developing a solution. The International Bureau suggested using the global (digital) identifier pilot as a proof of concept to assess feasibility and document potential issues with adopting global identifiers. The Delegation of Saudi Arabia agreed on the suggestion by the International Bureau and expressed its interest in the pilot. The CWS requested the International Bureau to collaborate with some interested IPOs on the global (digital) identifier pilot and report the results at the next session of the CWS. (See paragraphs 65 and 70 of document CWS/10/22.)

CONCEPT AND GOALS OF GLOBAL IDENTIFIERS

7. A single global identifier (hereafter referred to as Global ID) will be used to uniquely identify a natural person or a legal entity consistently, accurately and securely across IP systems and jurisdictions across the globe. Global IDs aim at providing more effective and seamless service experiences, removing duplication, and making online transactions easier in the IP ecosystems. Global IDs issued by one participant authority in the Global ID network should be accepted by all other participant authorities.

8. Each participant authority should be able to issue, verify and maintain Global IDs (“distributed operation”). The holder of a Global ID should be responsible for controlling and maintaining their data quality (“user-controlled data”). The Global ID service will be operated under a governance model which will be established by the participant authorities and coordinated by the International Bureau (“coordinated governance”).

9. Global IDs can be used in almost all transactions between actors in the IP ecosystem, in particular, IP right transfers and global assignments. Therefore, the use of Global ID will play a pivotal role in IP ecosystems. To support the Global ID implementation by IPOs and Global ID end users, the International Bureau plans to develop and provide the Global ID platform using private/permissioned blockchain technologies and associated solutions, including providing Global ID digital wallets for digital verifiable credentials.

PROGRESS REPORT ON GLOBAL IDENTIFIER PILOT

10. The Global ID Pilot project kicked off in February 2023 (herein after referred to as the Pilot). Initially the Pilot consists of two Phases 1 and 2, and the Phase 1 has been completed in October 2023. It was agreed by project participants that the Phase 2 should be split into two Phases 2 and 3, which is further explained below. The following five IPOs, and their associated industry stakeholder groups, participated in Phase 1:

- The European Union Intellectual Property Office (EUIPO)
- The International Union for the Protection of New Varieties of Plants (UPOV)
- The Korean Intellectual Property Office (KIPO)
- The Saudi Authority for Intellectual Property (SAIP)
- The United States Patent and Trademark Office (USPTO)

As the Global ID Project has a broad impact during IP right prosecution, those Offices nominated their experts from business, legal and IT areas.

Objectives of Pilot Project

11. The Global ID pilot project was launched with the following main objectives to:
- Initiate a collaborative project with several IP offices and other stakeholders to address the long-standing issue of name standardization and digital identity in the IP community, preferably applying the use of frontier technologies;
 - Explore with stakeholders the feasibility of using blockchain technologies to implement global digital identifiers for individuals and entities operating in the IP ecosystem to streamline their IP journey, including IP prosecution process with or without their own national IDs;
 - Identify business and IT challenges (e.g., security and data privacy) which may be experienced when establishing the Global ID and provide potential solutions to address them; and
 - Develop technical recommendations, including a Global ID Governance model.

Scope of Pilot Phase 1

12. According to the original plan, there were two Phases of this Pilot:

- Phase 1: Business Analysis and Scoping; and
- Phase 2: System Development and Testing.

During Phase 1 from February to October 2023, to prepare the Phase 1 deliverables, the Project team:

- researched, collected and analyzed regulations, practices, guidelines and recommendations;
- assessed potential challenges; and
- researched technical solutions currently used widely or only available in specific countries or regions, in relation to digital identity, including blockchain-based digital ID and existing industry standards.

13. As a digital identity has already been implemented in some countries based on different available technologies, the Pilot considered how these existing solutions could be integrated or interoperable with the proposed blockchain-based Global ID. For interoperability with existing digital identities, the Pilot considered, and where possible applied, the W3C Decentralized identifiers (DIDs) guidance published in July 2022. At the same time, the Pilot also considered those IPOs which do not allow their clients to use a digital identity.

14. Noting that there are ongoing projects and others planned to be implemented using blockchain technologies, during Phase 1 consideration was made regarding reusability and interoperability of the proposed Global ID solutions for other blockchain-based services. For example, global assignment of IP rights, in the future.

18. At the conclusion of Phase 1, several documents were delivered, including the recommendations on Global ID structure, Global ID workflow and the technical specification for the blockchain and Decentralized Identifiers (DID) implementation. Other documents which were scheduled for delivery during Phase 1 but remain outstanding are: Global ID Governance model, privacy statements, and terms and conditions of use.

15. The Global ID Governance model defines the way rules, standards and actions are structured, utilized, maintained, regulated and held accountable in the Global ID network. This document should define:

- Participant roles and their accountability;
- Membership of Participant Authorities;
- Operational guidelines;
- Legal governance scheme including terms and conditions (holders and IPOs/the International Bureau) and data protection; and
- Technical governance scheme including the type of blockchain network. i.e., private versus permissioned and the types of frameworks available including Hyperledger Fabric, Indy and Aries.

Key findings from Phase 1

16. The participants Offices identified several challenges and opportunities throughout Phase 1. The key findings are:

- Offices have different practices and regulations on managing customer IDs and are at different stages of readiness to implement Global IDs. For instance, some Offices issue a single and unique ID per customer and some Offices are ready to process digital ID;
- The Pilot was able to develop a proof of concept to assess the feasibility of establishing an international database to standardize applicant names, establishing its readiness for development;
- Global ID is fundamental step towards the establishment of a more connected IP ecosystem, and the participant Offices and Industry Groups are supportive of this move;
- Global ID governance should be established in an agile manner to build trust among the participant Offices and while addressing IPOs' various data privacy policies and practices;
- Global ID requires a fundamental improvement of the business operation of IP offices so organizational support at the participant IPOs is critical
- Common use cases of Global ID should be agreed on early and the International Bureau should engage in the development of the use cases, including global assignment; and
- Use of Global IDs for WIPO services will accelerate the Global ID's adoption around the globe.

GLOBAL ID OPERATIONAL WORKFLOW

17. The Global ID operational workflow incorporates the issuance, verification and maintenance of Global IDs, where the following main roles are defined:

Roles	Participants	Accountability
Holders	natural persons (individuals) and legal entities (businesses)	<ul style="list-style-type: none"> – Request Global ID – Provide required data considering terms and conditions – Ensure the data remains up-to-date – Controls whom the data is made available to
Issuers	IP offices and International Bureau	<ul style="list-style-type: none"> – Collect and process required data of Holders of issuing Global ID, including identity proofing – Amend Global ID related data upon Holders' request – Following data protection
Verifiers	IP offices and International Bureau	<ul style="list-style-type: none"> – Collect and process required data for verification following data protection
Platform provider	International Bureau	<ul style="list-style-type: none"> – Provide and maintain Global ID Platform and services, including Global ID generation upon requests by issuing Offices – Ensure platform security, availability and scalability

Global ID Issuance

18. Upon request by a Holder, IPOs can issue a Global ID at any stage in the IP rights lifecycle. It is recommended though, that to reap maximum benefits, a Holder should have a Global ID before applying for an IP right. In addition, IPOs can issue a Global ID as *ex-officio* on the basis of their customer number as long as the process of the IPO's customer number is compliant with the Global ID Governance, and the Holder agrees on the ex-officio issuance.

19. To ensure a single and unique Global ID per Holder, the Holder should provide the following mandatory information:

- Name, date of birth, email and potentially postal address in English using UTF-8 encoding in case the Holder is a natural person; and
- Name, business registration number, email and potentially postal address in English using UTF-8 encoding in case the Holder is a legal entity.

20. For the purposes of identifying an individual or entity, the IPO will request the Holder to provide a government issued document such as a copy of a Passport, a National ID, driving license, or business registration document. The IPO will then provide a single and unique Global ID and assign it to the Holder. The mandatory information will be stored in the blockchain network among participant Offices.

21. In addition, the Holder can also provide some optional information such as phone number and postal address in different languages which will be stored in the centralized database that the International Bureau will provide. The optional information can be accessed and retrieved by IPOs upon the Holder's agreement, so the Holder does not need to reenter the same information when filing at different IPOs. At the Global ID issuance step, the Issuing Office will be encouraged to map the Global ID to the Office's customer ID, or other relevant data.

Global ID Verification

22. The verification of the Global ID will be automatically done through the blockchain consensus mechanism for the identification of Global ID. If the Holder approaches an IPO (e.g., 2nd filing Office) with the existing Global ID that was provided by the issuing IPO (e.g., 1st filing Office), the 2nd filing Office will take a further step towards the authentication or authorization of Global ID by validating it with required information and linking it to existing data, e.g., IP application or IP right that the Holder owns. This verification/validation of the information will be stored in either the blockchain network or the Holder's digital wallet, so that the Holder will use the information when they access data verified by the 2nd filing Office without further verification process.

Global ID Maintenance

23. The maintenance of Global IDs will occur at Holder request as needed, such as during the processes of merging of Global IDs, revocation of a Global ID or change to the name or address. Version history of any changes made will be stored in the shared blockchain network.

PROPOSED GLOBAL ID STRUCTURE

24. The Global ID will consist of 18 positions of alphanumeric characters. The combination of the "Year of Issue" and "Unique Random string" will guarantee the uniqueness of Global ID in the Global ID ecosystem.

- *Positions 1 to 2:* Fixed value "WO" to indicate Global IDs for IP community, which are distinguished from identifiers used in other ID systems;
- *Position 3:* Type of Holders. Currently only two values are defined: '1' for Natural Person and '2' for Legal Entity. Other types may need to be defined in the future;
- *Positions 4 to 5:* The WIPO ST.3 two-letter code of the Office/Organization/Country that issues the Global ID such as 'IB' for the International Bureau of WIPO;
- *Positions 6 to 9:* Year of Global ID issued in YYYY date format;
- *Positions 10 to 17:* Unique Random string generated by a system per year. The 8 positions of alphanumeric string can result in more than 2 trillion unique sequence numbers per year so is considered sufficient to provide Global IDs for the world's population in a given year; and
- *Position 18:* Check digit for redundancy check and error detection. An algorithm will be used to generate check digit by using the first 17 positions.

NEXT STEPS

25. On the basis of the outcomes from Phase 1, the International Bureau plans first to develop a sandbox for testing and a production system. The original plan of two phases has been extended and now will be comprised of three Phases, which are detailed in the roadmap below. For the next steps, the International Bureau notes that the participation of IPOs and IP industry private entities that have their cooperative initiatives for which the Global IDs could be used, will be necessary to understand their specific needs. At the same time, to ensure that project remains manageable, the participants should be limited. The International Bureau will invite a limited number of Offices and other stakeholders to the next Phases of the pilot, in light of the chosen business use case(s) of the Global ID. The International Bureau will engage in the development of the use case(s) for example, the global assignment use case, as needed.

IPOs' Maturity Level for Global ID implementation

26. The Phase 1 Participant Offices noted that their practice and current IT environment are different and that different support would be required for their migration to the implementation of the Global ID. They agreed on the following three maturity levels for migration:

- Level 1: Offices will rely on the IT infrastructure, including blockchain node and services that the International Bureau will provide, including digital wallets for Verifiable Credentials (VCs). The Offices will connect the Global ID platform and the services via the common API service that the International Bureau will deploy;
- Level 2: Offices will have an option to host a Global ID blockchain node in their infrastructure and interact with the Global ID users via VCs using their node; and
- Level 3: Offices will start incorporating the Digital Wallet and VC as part of core IP processes, including e-signature which will be provided by the Digital Wallet.

Project Roadmap

27. The International Bureau considers the following roadmap for the Global ID Pilot:

Phase	Planned main activities	Timeframe
Phase 1	– Define Business analysis and scoping	Completed
Pre-Phase 2	– Finalize the Global ID Governance – Agree on the participant Offices and other Stakeholders which will actively participate in Phases 2 and 3 – Agree on the common use cases of Global ID such as global assignment	On-going until March 2024
Phase 2	– The International Bureau to develop Sandbox – Offices and other stakeholders to participate the Sandbox development and test it with mock data – The International Bureau to start implementing Global ID to its services – Offices to prepare their implementation considering required changes to their business practices and regulations, and IT systems	March 2024 - 2025
Phase 3	– The International Bureau to develop production system and support Offices' implementation – Some Offices and other stakeholders to test Sandbox with real data – Some other Offices to start their implementation of Global ID	Year 2025 - 2026

28. *The CWS is invited to:*

(a) note the content of the present document;

(b) consider and comment on the Global ID structure as referred to paragraph 24 above; and

(c) consider and comment on the next steps as referred to paragraphs 25 to 27 above.

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