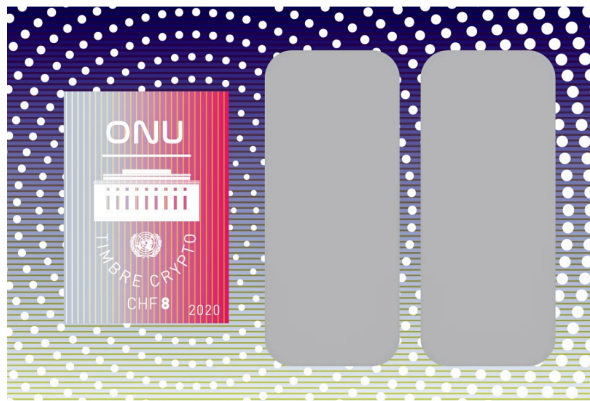


THE UNITED NATIONS' CRYPTO STAMPS

EDITOR

The Society is very grateful to the British Thematic Association and Ms. Estelle Shale for enabling us to quote the latter's article on this subject and to the United Nations Postal Administration's Clarissa Fuernsinn for the regular press releases on its new issues.

I tend to avoid devoting too much space in the Newsletter on topics that do not directly relate to Swiss philately, but the presence of the UN Office in Geneva enables me to draw your attention to a new aspect of the study of postage stamps. It may not be everybody's taste, but here goes!



The UN (Geneva Office) 8CHF Crypto Stamp

In November last year, the UN Postal Administration announced the issue of their first 'Crypto Stamps'. They introduced them in their press release as follows:

“The UN Secretary General’s Strategy on New Technologies

In December 2018, United Nations Secretary-General António Guterres launched a first-time ever Strategy on New Technologies for the United Nations. The goal of this initiative is to define how the United Nations system will support the use of new technologies like artificial intelligence, biotechnology, blockchain, and robotics to accelerate the achievement of the 2030 Sustainable Development Agenda and to facilitate their alignment with the values enshrined in the UN Charter, the Universal Declaration of Human Rights, and the norms and standards of international law. The Secretary-General identified five guiding principles to support this strategy:

Protect and promote global values.	Foster inclusion and transparency.	Work in partnership.
Build on existing capabilities and mandates.	Be humble and continue to learn.	

To learn more about the United Nations Sustainable Development Goals visit <https://sdgs.un.org/goals>

Crypto stamps

In line with this new strategy, the United Nations Postal Administration is excited to announce the launch of its first time ever Crypto Stamps designed by Sergio Baradat (United Nations). The Stamps were developed in conjunction with the United Nations Office of Information, Communication and Technology and run on Ethereum* Blockchain. Three mini-sheets of one stamp each in the denominations of US\$ 7.75, CHF 8,00 and € 7,00 were issued on 24th November 2020. They were printed by Royal Joh Enschedé (The Netherlands) using the Hexachrome/Foil processes. The availability is limited to 90,000 stamps in total, 30,000 per issuing office (Geneva, New York and Vienna), and encoded into the smart contract.

To learn more about UN Crypto Stamps and how to claim them visit <https://crypto.unstamps.org/>

How do Crypto stamps work?

The UN Crypto Stamp is a new generation of United Nations stamps that are connected to the Ethereum blockchain. Each stamp bears a unique secret code hidden behind a scratch-off area. The secret code enables its owner to activate exactly one counterpart of that stamp on the blockchain as a digital collectible. The creation, ownership, exchange and trading of the digital stamps is managed through a smart contract deployed on the Ethereum blockchain.

***Ethereum** is a global, open-source platform for decentralised applications. Wikipedia describes it as: "the second-largest cryptocurrency platform by market capitalisation, behind Bitcoin. It is a decentralised open source blockchain featuring smart contract functionality."

To use all available functions in the UN Crypto Stamp UN blockchain app you must enable your browser to access the Ethereum blockchain by installing a crypto wallet².

What you will need to participate:

- A funded Ethereum wallet to pay for the Ethereum transaction fees ("gas") that occur when executing the activation function in the smart contract on the blockchain.
- One or more stamps that you can purchase from the United Nations Postal Administration, either online in the United Nations stamps webshop or at the points of sale listed on the United Nations stamps website.

Variations in the Crypto stamps

Each stamp is linked to one Sustainable Development Goal. Since there are three issuing offices and 17 Goals, there are 51 variations of the UN CRYPTO STAMP in the collection. You are encouraged to find and collect all 51 variations! There are equal quantities of all stamp variations and they are arranged sequentially from Goal 1 to Goal 17."

That is the end of the UNPA's introduction to these new stamps. Not having a Masters degree in these new technologies or crypto currencies, it left me with some questions that needed answering before I could feel safe to present the subject to our readers. Luckily, I have come across a short article by Estelle Shale published in the British Thematic Association's journal 'Themescene' (vol.38 June 2021, page 54) entitled 'Blockchain Meets Philately'. It presents the subject in very clear terms, or as clearly as one might hope for given the complexity of the subject. (Apologies for perhaps under estimating all those members who have already absorbed this new aspect of our high-tech world and have perhaps invested in bitcoin, etc.)

In summary, Ms. Shale informs us that you should first understand the blockchain principle on which this technology is based. She states: "In essence blockchain is digital bookkeeping. It records all the details of transactions. The innovation comes in the manner of the storage of that information. The information is powerfully encrypted, duplicated and then distributed across a vast network of computer systems (*hence, presumably the current controversy over Bitcoin's energy use levels?* - HPS Ed.). This protects the data from hacking and falsification. There is no central data base to be hacked or manipulated, there is no all-powerful owner/administrator of the data to become corrupt, and if someone manages to falsify one record (which is difficult) there are many other true copies elsewhere that identify the cheating. There is a good introduction to the subject at <https://www.euromoney.com/learning/blockchain-explained> although of course this takes a financial perspective. The technology has a wide application to any record keeping that needs to be secure. There is a description of blockchain cryptography of stamps at <https://crypto.unstamps.org/behind-the-scenes> but it is only for the technically minded.



..... Austria was the first country to issue crypto stamps (see two examples on registered cover shown above) followed by the UN, Croatia and Gibraltar at the time of writing The Austrian post office chose to issue these stamps and make them available as physical items with "linked non-fungible tokens" (NFTs) via the Ethereum community. There is an excellent explanation of what this means at <https://ethereum.org/en/nft/> which I quote here: "NFTs are tokens that we can use to represent ownership of unique items. They let us tokenise things like art, collectibles, even real estate. They can only have one official owner at a time and they are secured by the Ethereum blockchain – no one can modify the record of ownership or copy/paste a new NFT into existence.

² A **crypto wallet** is a small programme that enables the browser on your computer to securely communicate with the Ethereum blockchain on your behalf. With a crypto wallet you can manage your blockchain identity and the assets owned by your identity on the blockchain: crypto coins (ETH) and digital collectibles such as the UN Crypto stamp.

Each crypto stamp has a digital twin (the NFT) that has an owner, and those digital NFTs can be added to collections and sold and transferred just like physical stamps have been since the C19th. So, do you own the digital version of the physical crypto stamps on a cover you receive? The answer is no! You can scan the QR code and see who does own it (in terms of a long code not a personal identifier/name) but that is all. The Austrian Issue 1 crypto stamps (*and, it appears, the UN crypto stamps? – HPS Ed.*) had additional codes that could be detached from the stamp, and it is these detachable codes that allow you to register ownership and put the digital twin in a “wallet” i.e. a digital collection. Thus you can separate the postally valid stamp from the digital ownership codes. Imagine a credit card that can be snapped in two. Austria's Issue 2 is like a sim card for your 'phone, you press the stamp out of the card containing it. The codes are on the back, but the adhesive is very strong and any attempt to remove the stamp would wreck the cover and, in all likelihood, the stamp and codes so I shall not attempt it.

The Austrian crypto stamps are quite substantial plastic plaques, half the size of a credit card and about half the thickness..... conventional handstamp ink has a hard time adhering to the plastic. The thickness of the stamp also causes quite a break in the cancel registration, not too surprisingly. Details and illustrations of the Austrian stamps can be found at <https://crypto.post.at/>

The UN crypto stamps have three designs representing each of the UN Offices and claims that each stamp is linked to one of the 17 sustainable development goals. Since this is not visible, I assume that this link is tied to the digital twin and therefore there is an element of pot luck. There is no way to specify a goal that you (*as a thematic collector – HPS Ed.*) are interested in when purchasing.

At present, different issuing authorities are partnering with different blockchain providers so any collection of NFTs would necessarily be dispersed amongst a number of digital wallets. However, the UPU has announced a project for the creation of a digital marketplace for crypto stamps and the intention of creating a unified platform for collections.”

Ms. Shale concludes: “Blockchain technology, although invisible to most of us, will become widely adopted for both legitimate and nefarious purposes like most great inventions, but are crypto stamps a gimmick? Surely, at the moment, the answer must be yes, the digital twinning being aimed squarely at collectors. Nonetheless, there is palpable excitement in the blockchain community over these issues and so they are spreading the word on philately to a group that is, in the main, well out of the reach of conventional approaches to the hobby. For hard core techies crypto stamps are a portal – philately meeting them on their home (digital) turf!”

So, there it is – the best I can do as an introduction and partial explanation to the weird world of crypto stamps. Will it change the world of philately? Will it help to attract the next generation of techno-savvy youngsters? Will Switzerland, Liechtenstein or the UK join the crypto stamps club? Watch this space - if you care!

P.S. I would welcome additional information, including on any purchases you have made of UN crypto stamps and your experiences.