

Project Helios: The Anonymous multilingual citizen journalist (CJ)

Citizen Journalism has become indispensable in the age of digital social networking. With the EU project HELIOS, SWISS TXT and its partners want to offer a new platform addressing this and are merging the smartphone with the Blockchain.

What's the big deal?

Freedom of the press does not exist everywhere in the world. Journalists in repressive states risk their freedom and, depending on the circumstances, their lives when they report grievances. Thanks to Helios they can go about their work without fear. Since the blockchain automatically creates trust thanks to Smart Contract, users who use content have less to worry about its authenticity. Furthermore, trusted content is automatically subtitled and rewarded. Because of a DApp users can see what content is posted and what the CJ received in return.

Accessible / multilingual

Uploaded content (video / audio or pictures) will automatically be processed to become accessible. Therefore, original spoken audio or voice-over audio will be transcribed by automatic speech recognitions systems in the cloud and segmented to provide intralingual closed captions (CC). Afterwards, the content author or somebody trusted in the crowd e.g. a professional human subtitle editor can edit the closed captions so that they are e.g. easier to understand or shorter. The system provides an easy-to-use web editor to perform this task. The backend service in the cloud can then automatically translate the edited closed captions into the European Languages as desired to become time code-based interlingual subtitles. These subtitles can be reworked to better reflect the spoken content, again via the web editor. Through this, the content shall be available for all citizens in Europe. All Changes and creation of the Accessibility documents will be automatically tracked in the BlockChain.

IPFS

The Internet has become centralized in recent years. Hosting has moved more and more into the cloud to large providers like Google. IPFS is a peer-to-peer protocol that is supposed to decentralize the network again. IPFS is based on the blockchain. Files that are loaded into IPFS are therefore distributed decentral and are unchangeable. For the videos this means that they are not stored somewhere on a Google server, but distributed to several users of the network. It can be clearly identified and assigned to it. But the whole process still happens anonymously. This is where the so-called Smart Contract comes into play.

Smart Contract

The Smart Contract goes back to Ethereum co-founder Vitalik Buterin. According to Buterin, Ethereum is intended to go beyond trading in crypto currencies. Vitalik envisions a kind of "Internet of Money"; based on a neutral, openly accessible infrastructure that is not controlled by any central unit and is only committed to its users. Transactions within the Smart Contract are traceable and irreversible.

DApp

A DApp is a decentralized app. First, a DApp should be open source. So, all participants must have insight into its code base. Secondly, the DApp must be part of a blockchain. Furthermore, the validators of the blockchain - also known as miners - should be encouraged to mine with a rewarding system. The application community must agree on a cryptographic algorithm to show proof of value. Thanks to IPFS and Ethereum, Project HELIOS' DApp meets all these requirements. Via DApp, Helios users can view the uploaded content. Thanks to the blockchain, each content is unchangeably and clearly assigned to an author - even if the author remains anonymous. The content is freely available. Authors can, however, determine whether and how much ether they want for their content.