Abstract—Digital assets is one of the assets that become an option in the internet era. With the adoption of the internet, many creators move to create a digital asset and sell their assets via internet. A proper sales mechanism is needed to tackle this phenomenon. Lack of transparency on sales became a consideration for a creator who wanted to sell an asset in this medium. Most of publishers do not publish the number of sales to a creator honestly, because all the data is stored privately in publisher server and can only be accessed by publisher. This can lead to unfair distribution of royalties for creator. To overcome the weakness of the centralized system, researchers proposed to use smart contract in public blockchain. In this case, the data link the digital assets file is kept as a plain text in the smart contract, such that user can directly obtain or copy the digital assets from the smart contract. To overcome this problem, this study uses Ethereum smart contract for became an intermediate, IPFS for distributing file, ERC-721 as Token standard ownership on Ethereum blockchain and ECC to secure the data link of the digital assets file on the smart contract. Based on the discussion, it is proven that the proposed method can kept the link of the digital assets file secured such that the author can maintain his intellectual property.

Keywords—IPFS, smart contract, elliptic curve cryptography, digital assets.