

A digital identity system based on a basic feature phone

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Proof of identification is necessary to access basic services, such as opening a bank account, but in 2018 almost a billion people did not have an official proof of identity. Most of these people live in underdeveloped countries. More than 80% of people without formal identity come from sub-saharan Africa and South East Asia(43). At the same time, the concept of decentralised digital "self-sovereign identity" (SSI) has been gaining popularity since Bitcoin launched in 2008. However, most examples of digital identity in the world today require a smartphone to use. This further limits people from underdeveloped countries from obtaining an identity even digitally. This paper proposes a system using USSD, a text-based telecommunications protocol, and Ethereum-based, decentralised identity smart contracts to create a digital identity system which can be accessed by people in countries with less smartphone availability, and presents a proof-of-concept application which illustrates how the system would work for users.