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**AMMAR et al.**(10) **Pub. No.: US 2023/0231725 A1**(43) **Pub. Date: Jul. 20, 2023**(54) **ELECTRONIC DOCUMENT SIGNATURES**(71) Applicant: **nChain Licensing AG**, Zug (CH)(72) Inventors: **Bassem AMMAR**, London (GB); **Wei ZHANG**, London (GB); **Craig Steven WRIGHT**, London (GB)(21) Appl. No.: **18/011,083**(22) PCT Filed: **Jun. 3, 2021**(86) PCT No.: **PCT/EP2021/064909**

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**ABSTRACT**

According to a first aspect, there is provided a computer-implemented method of cryptographically linking multiple documents, having multiple electronic signature requirements, via a sequence of blockchain transactions, the method comprising: computing document signature data satisfying a first signature requirement for an existing document, the first signature requirement defined in a blockchain transaction containing or referencing the existing document; wherein the document signature data signs a portion of a linking transaction containing or referencing a supplementary document, the linking transaction comprising an input for validly spending a spendable output of the blockchain transaction, whereby the document signature cryptographically links the supplementary document with the existing document; and wherein the signed portion comprises multiple outputs of the linking transaction; wherein a first of the multiple signed outputs is spendable and associated with the existing document, the signed portion defining a second signature requirement for the existing document; and wherein a second of the multiple signed outputs is spendable and associated with the supplementary document, the signed portion defining a signature requirement for the supplementary document.

