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(54) Title (EN): BLOCKCHAIN-BASED TRUSTABLE GUARANTEES

(54) Title (FR): GARANTIES FIABLES REPOSANT SUR UNE CHAÎNE DE BLOCS

(57) Abstract:

(EN): Disclosed herein are methods, systems, and apparatus, including computer programs encoded on computer storage media, for processing blockchain-based guarantee information. One of the methods includes receiving a cyphertext of a digital document specifying a guarantee from a first computing device associated with a first guarantor and one or more zero-knowledge proofs (ZKPs) related to one or more values associated with the guarantee; verifying that the one or more ZKPs are correct; upon verifying that the one or more ZKPs are correct, storing the cyphertext to a blockchain based on performing a consensus algorithm; receiving a first message from a second computing device associated with a beneficiary or a representative of the beneficiary, the first message including an acceptance of the guarantee by the beneficiary; and updating a status of the guarantee to indicate that the guarantee has been accepted by the beneficiary.

(FR): L'invention concerne des procédés, des systèmes et un appareil, comprenant des programmes informatiques codés sur des supports d'enregistrement informatiques, permettant de traiter des informations de garanties reposant sur une chaîne de blocs. L'un des procédés consiste à recevoir un cryptogramme d'un document numérique spécifiant une garantie en provenance d'un premier dispositif informatique associé à un premier garant et à une ou plusieurs preuves à connaissance nulle (ZKP) en rapport avec une ou plusieurs valeurs associées à la garantie; à vérifier que lesdites ZKP sont correctes; après vérification que lesdites ZKP sont bien correctes, à mémoriser le cryptogramme dans une chaîne de blocs reposant sur l'exécution d'un algorithme de consensus; à recevoir un premier message en provenance d'un second dispositif informatique associé à un bénéficiaire ou à un représentant du bénéficiaire, le premier message comprenant une acceptation de la garantie par le bénéficiaire; et à mettre à jour un état de la garantie pour indiquer que la garantie a été acceptée par le bénéficiaire.

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