

Title (en)

SET OF PARTICULAR KEYS FOR PROVING AUTHENTICITY OF AN ENTITY OR THE INTEGRITY OF A MESSAGE

Title (de)

SCHLÜSSELSATZ ZUM BEWEIS DER AUTHENTIZITÄT EINER EINHEIT ODER DER INTEGRITÄT EINER NACHRICHT

Title (fr)

JEUX DE CLES PARTICULIERS DESTINES A PROUVER L'AUTHENTICITE D'UNE ENTITE OU L'INTEGRITE D'UN MESSAGE

Publication

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Application

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Abstract (en)

[origin: WO0126278A1] The invention concerns a set of particular keys designed to prove the authenticity of an entity or the integrity of a message. The proof is established by a set of keys comprising:  $m$  ( $\geq 1$ ) pairs of private  $Q_i$  and public  $G_i = g^{Q_i}$  values; a public module  $n$  consisting of the product of  $f$  ( $\geq 2$ ) prime factors; an exponent  $v=2^k$  ( $k > 1$ ), linked by relationships of the type:  $G_i \cdot Q_i^{v-1} \bmod n$  or  $G_i^{Q_i^{v-1}} \bmod n$ . The set of keys is produced such that: among the  $m$  numbers obtained by increasing  $Q_i$  or its inverse modulo  $n$  to modulo  $n$  square,  $k-1$  times rank, at least one of them is different from  $\mp g_i$ ; among the  $2m$  equations:  $x^{Q_i} \bmod n$ ,  $x^{Q_i^{-1}} \bmod n$  at least one of them has solutions in  $x$  in the ring of the modulo  $n$  integers.

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