

Title (en)  
A KEY-AGREEMENT SYSTEM AND METHOD

Title (de)  
VORRICHTUNG UND VERFAHREN ZUR SCHLÜSSELÜBEREINKUNFT

Title (fr)  
SYST ME ET PROC D D'AGR MENT DE CL S

Publication  
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Application  
**EP 99928197 A 19990705**

Priority  
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Abstract (en)  
[origin: WO0005836A1] A method for carrying out a key distribution process, whereby each member (Useri) who uses the services of a Certifying Authority (CA) is provided with a member's public key (PUi) and a member's private key (si), wherein said process is effected over a finite group of points comprising the steps of: (1) permitting said Certifying Authority to select a generating group-point (G); (2) to generate a random Certifying Authority private key (d); (3) to generate a Certifying Authority public key (PS) ( $PS=d*G$ ); (4) permitting said member (Useri) to generate a first member's random value (xi) and calculate a first intermediate member's public key ( $xi*G$ ); (6) permitting said Certifying Authority to calculate said member's public key (PUi) and member's intermediate private key (pi), wherein: a second member's random value (yi) is generated and a second intermediate member's public key ( $yi*G$ ) is calculated, said member's public key (PUi) is calculated:  $PUi = xi*G + yi*G$ , a member's temporary value ( $H(IDi, PUi)$ ) is calculated by operating with a hash transformation (H), said member's intermediate private key (pi) is calculated ( $pi=H(IDi, PUi)*d + yi$ ); (7) permitting said member to generate said member's private key (si) ( $si=pi+xi$ ).

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