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(54) **METHODS FOR SECURE CRYPTOGRAM GENERATION**

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(57) **ABSTRACT**

A computer-implemented method performed by a user device is provided. The computer-implemented method includes receiving a message including an encrypted credential from a server computer; determining a response shared secret using a private key and a server public key; decrypting the encrypted credential using the response shared secret to determine a credential; obtaining a key derivation parameter from the credential; determining a first cryptogram key using the key derivation parameter; generating a first cryptogram using the first cryptogram key; and sending the first cryptogram to a second computer.

