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A B S T R A C T

A reception means receives post-office box's encrypted data, which is obtained by encrypting the data by using a post-office box's public key, from the sending apparatus. A re-encryption key storage means stores a re-encryption key used for re-encrypting the post-office box's encrypted data into recipient's encrypted data, which is obtained by encrypting the data using a recipient's public key that is different from the post-office box's public key. A re-encryption means re-encrypts the received post-office box's encrypted data to the recipient's encrypted data using the re-encryption key stored in the re-encryption key storage means. A transmission means transmits the re-encrypted recipient's encrypted data to the receiving apparatus.