[CLAIMS]

[Claim 1]

A system comprising:

a file encrypting apparatus; and

a file decrypting apparatus that decrypts an encrypted electronic file, wherein

the file encrypting apparatus comprising:

an encryption key acquiring unit that acquires one or more encryption keys determined for respective ones of one or more users permitted to access an electronic file;

a file encrypting unit that encrypts the electronic file itself;

a supplementary information encrypting unit that encrypts, by using the one or more encryption keys, supplementary information including a file decryption key required for decryption of the encrypted electronic file; and

an output unit that embeds the encrypted supplementary information in the encrypted electronic file;

the file decrypting apparatus having:

a supplementary information decrypting unit that decrypts the encrypted supplementary information;

a file decrypting unit that decrypts the encrypted electronic file using the file decryption key included in the supplementary information; and

a communication determining unit that determines whether or not it is possible to communicate with a management server that manages the file decryption key, and wherein

if it is determined that it is not possible to communicate with the management server, the supplementary information decrypting unit decrypts the encrypted supplementary information, and the file decrypting unit decrypts the encrypted electronic file itself using the file decryption key included in the decrypted supplementary information, and if it is determined that it is possible to communicate with the management server, the file decrypting unit decrypts the encrypted electronic file itself using the file decryption key received from the management server.

[Claim 2]

The system according to Claim 1, wherein the supplementary information includes information indicating an access right for the electronic file given to respective ones of the one or more users.

[Claim 3]

The system according to Claim 1 or 2, wherein the supplementary information

includes information indicating operation on the electronic file that respective ones of the one or more users should be permitted to perform or prohibited from performing.

[Claim 4]

The system according to Claim 3, wherein

the operation includes at least one of: operation of viewing the electronic file; operation of editing the electronic file; operation of printing the electronic file; operation of saving the electronic file, operation of copying data included in the electronic file; and operation of capturing a display screen of the electronic file.

[Claim 5]

The system according to any one of Claims 1 to 4, wherein the output unit embeds, in the encrypted electronic file, user identification information identifying respective ones of the one or more users.

[Claim 6]

The system according to any one of Claims 1 to 5, further comprising:

a selecting unit that selects the one or more users; and

an encryption key receiving unit that receives one or more encryption keys predetermined for the one or more users selected by the selecting unit, from a management server that manages: a supplementary information decryption key for decrypting access control information encrypted using the encryption key; and the encryption key.

[Claim 7]

The system according to any one of Claims 1 to 6, wherein

user identification information identifying respective ones of the one or more users is embedded in the encrypted electronic file,

the file decrypting apparatus further has an identification information determining unit that determines whether or not user identification information of a user of the file decrypting apparatus is embedded in the encrypted electronic file, and

if it is determined that the user identification information of the user of the file decrypting apparatus is embedded in the encrypted electronic file, the supplementary information decrypting unit decrypts the encrypted supplementary information, and the file decrypting unit decrypts the encrypted electronic file using the file decryption key included in the decrypted supplementary information.

[Claim 8]

The system according to any one of Claims 1 to 7, wherein

the file decrypting apparatus further has:

a receiving unit that receives a supplementary information decryption

key required for decrypting the supplementary information, from a management server that manages: the supplementary information decryption key for decrypting access control information encrypted using the encryption key; and the encryption key; and

a storage unit that stores therein the supplementary information decryption key received by the receiving unit.

[Claim 9]

A program for causing a computer to function as the system according to any one of Claims 1 to 8.