

CLAIMS

1. A data management system in which secret data encrypted in a communication terminal is transmitted to and stored in a data management server, and the secret data stored in the data management server is received and decrypted by the communication terminal,

wherein the communication terminal has a data storing function and a data reading function,

the data storing function executes:

a key generation process that generates an encryption key and a data ID using a terminal identification ID that is a character string specific to the communication terminal;

an encryption process that encrypts the secret data using the encryption key; and

a secret data storing process that transmits, to the data management server, the secret data encrypted by the encryption process together with the data ID, and causes the data management server to associate the secret data with the data ID and to store the associated data and ID, and

the data reading function executes:

a key regeneration process that generates again the encryption key and the data ID using the terminal identification ID stored in a memory of the communication terminal;

a request process that transmits the data ID to the data management server to request the data management server to transmit the secret data corresponding to the data ID; and

a decryption process that decrypts the secret data received from the data management server, using

the encryption key, and
wherein each of the data storing function and the data
reading function further has a discard process that causes
the communication terminal to discard the encryption key
and the data ID after the encryption process.

2. A data management system in which secret data
encrypted in a communication terminal is transmitted to and
stored in a data management server, and the secret data
stored in the data management server is received and
decrypted by the communication terminal,

wherein the communication terminal has a data storing
function and a data reading function,

the data storing function executes:

terminal identification ID storing process that
receives the terminal identification ID, that is a
character string specific to the communication
terminal, from the data management server, and
internally stores the received ID,

a key generation process that generates an
encryption key and a data ID using the terminal
identification ID;

an encryption process that encrypts the secret
data using the encryption key; and

a secret data storing process that transmits, to
the data management server, the secret data encrypted
by the encryption process together with the data ID,
and causes the data management server to associate the
secret data with the data ID and to store the
associated data and ID, and

the data reading function executes:

a key regeneration process that generates again
the encryption key and the data ID using the terminal

identification ID stored in a memory of the communication terminal;

a request process that transmits the data ID to the data management server to request the data management server to transmit the secret data corresponding to the data ID; and

a decryption process that decrypts the secret data received from the data management server, using the encryption key.

3. A data management system in which secret data encrypted in a communication terminal is transmitted to and stored in a data management server, and the secret data stored in the data management server is received and decrypted by the communication terminal,

wherein the communication terminal has a data storing function and a data reading function,

the data storing function executes:

a key generation process that generates an encryption key and a data ID using a terminal identification ID that is a character string specific to the communication terminal;

an encryption process that encrypts the secret data using the encryption key; and

a secret data storing process that transmits, to the data management server, the secret data encrypted by the encryption process together with the data ID, and causes the data management server to associate the secret data with the data ID and to store the associated data and ID, and

the data reading function executes:

a key regeneration process that generates again the encryption key and the data ID using the terminal

identification ID stored in a memory of the communication terminal;

a request process that transmits the data ID to the data management server to request the data management server to transmit the secret data corresponding to the data ID; and

a decryption process that decrypts the secret data received from the data management server, using the encryption key, and

wherein the communication terminal receives a first web display program that includes a first input form, from a first web server, and

stores the secret data input in the first input form in the data management server, using the data storing function.

4. A data management system in which secret data encrypted in a communication terminal is transmitted to and stored in a data management server, and the secret data stored in the data management server is received and decrypted by the communication terminal,

wherein the communication terminal has a data storing function and a data reading function,

the data storing function executes:

a key generation process that generates an encryption key and a data ID using a terminal identification ID that is a character string specific to the communication terminal;

an encryption process that encrypts the secret data using the encryption key; and

a secret data storing process that transmits, to the data management server, the secret data encrypted by the encryption process together with the data ID,

and causes the data management server to associate the secret data with the data ID and to store the associated data and ID, and the data reading function executes:

5 a key regeneration process that generates again the encryption key and the data ID using the terminal identification ID stored in a memory of the communication terminal;

10 a request process that transmits the data ID to the data management server to request the data management server to transmit the secret data corresponding to the data ID; and

15 a decryption process that decrypts the secret data received from the data management server, using the encryption key, and

wherein the communication terminal receives a second web display program that includes a second input form, from a second web server,

20 receives and decrypts the secret data stored in the data management server, using the data reading function, and

performs automatic completion into the second input form, using the decrypted secret data.

25 5. A data management program which functionalizes a computer device with communication function as the communication terminal according to anyone of claims 1 to 4.

30 6. A communication terminal used by the data management system according to anyone of claims 1 to 4.

7. A data management server used by the data management

system according to anyone of claims 1 to 4,

wherein the server receives the secret data and the
data ID from the communication terminal, associates the
secret data with the data ID, and stores the associated
5 data and ID in a data storage, and

reads, from the data storage, the secret data
corresponding to the data ID received from the
communication terminal, and transmits the read data to the
communication terminal.

WHAT IS CLAIMED IS:

1. A data management system in which secret data encrypted in a communication terminal is transmitted to and stored in a data management server, and the secret data stored in the data management server is received and decrypted by the communication terminal,

wherein the communication terminal has a data storing function and a data reading function,

the data storing function executes:

a key generation process that generates an encryption key and a data ID using a terminal identification ID that is a character string specific to the communication terminal;

an encryption process that encrypts the secret data using the encryption key; and

a secret data storing process that transmits, to the data management server, the secret data encrypted by the encryption process together with the data ID, and causes the data management server to associate the secret data with the data ID and to store the associated data and ID, and

the data reading function executes:

a key regeneration process that generates again the encryption key and the data ID using the terminal identification ID stored in a memory of the communication terminal;

a request process that transmits the data ID to the data management server to request the data management server to transmit the secret data corresponding to the data ID; and

a decryption process that decrypts the secret data received from the data management server, using the encryption key.

2. The data management system according to claim 1, wherein the data storing function further has a discard process that causes the communication terminal to discard the encryption key and the data ID after the encryption process.

3. The data management system according to claim 1, wherein the communication terminal further has a terminal identification ID storing process that receives the terminal identification ID from the data management server, and internally stores the received ID.

4. The data management system according to claim 1, wherein the communication terminal receives a first web display program that includes a first input form, from a first web server, and

stores the secret data input in the first input form in the data management server, using the data storing function.

5. The data management system according to claim 1,
wherein the communication terminal receives a second
web display program that includes a second input form, from
a second web server,

receives and decrypts the secret data stored in the
data management server, using the data reading function,
and

performs automatic completion into the second input
form, using the decrypted secret data.

6. The data management system according to claim 1,
wherein the communication terminal receives a web
display program from a web server,

the web display program includes a tag to cause the
communication terminal to access the data management server,
and

a computer processor of the communication terminal
executes the tag to cause the communication terminal to
request, from the data management server, transmission of a
program to construct the data storing function in the
communication terminal.

7. The data management system according to claim 1,
wherein the communication terminal receives a web
display program from a web server,

the web display program includes a tag to cause the communication terminal to access the data management server, and

a computer processor of the communication terminal executes the tag to cause the communication terminal to request, from the data management server, a program to construct the data reading function in the communication terminal.

8. A non-transitory computer-readable recording medium that stores a computer program to be executed by a computer apparatus having a communication function,

wherein the computer program constructs a data storing function and a data reading function in a communication terminal,

the data storing function executes:

a key generation process that generates an encryption key and a data ID using a terminal identification ID that is a character string specific to the communication terminal;

an encryption process that encrypts secret data using the encryption key; and

a secret data storing process that transmits, to the data management server, the secret data encrypted by the encryption process together with the data ID, and causes a data management server to associate the secret data with

the data ID and to store the associated data and ID, and
the data reading function executes:

a key regeneration process that generates again the
encryption key and the data ID using the terminal
identification ID stored in a memory of the communication
terminal;

a request process that transmits the data ID to the
data management server to request the data management
server to transmit the secret data corresponding to the
data ID; and

a decryption process that decrypts the secret data
received from the data management server, using the
encryption key.

9. A communication terminal that transmits encrypted
secret data to an outside, and receives the secret data
from the outside and decrypts the data,

wherein the communication terminal has a data storing
function and a data reading function,

the data storing function executes:

a key generation process that generates an encryption
key and a data ID using a terminal identification ID that
is a character string specific to the communication
terminal;

an encryption process that encrypts the secret data
using the encryption key; and

a secret data storing process that transmits the secret data encrypted by the encryption process together with the data ID, and associates the secret data with the data ID and stores the associated data and ID in an outside, and

the data reading function executes:

a key regeneration process that generates again the encryption key and the data ID using the terminal identification ID stored in a memory of the communication terminal;

a request process that transmits the data ID to the outside to request transmission of the secret data corresponding to the data ID; and

a decryption process that decrypts the secret data received from the outside, using the encryption key.

10. A data management server connected in communication to the communication terminal according to claim 9,

wherein the server receives the secret data and the data ID from the communication terminal, associates the secret data with the data ID, and stores the associated data and ID in a data storage, and

reads, from the data storage, the secret data corresponding to the data ID received from the communication terminal, and transmits the read data to the communication terminal.