

method of ensuring trust means that if an application is not directly associated with the broadcast wave, the application is unable to use the functions of the receiver.

[0010]

For this reason, applications of the related art may only be operated and managed in a limited manner, and there is demand to provide applications enabling more flexible usage.

[0011]

Embodiments of the present invention enable more flexible application usage by imparting trustworthiness to an application that operates together with a television program, without directly associating the application with a broadcast wave.

Solution to Problem

[0012]

According to a first aspect of the present invention, there is provided a reception device comprising: a content reception unit configured to receive AV content, the AV content being content transmitted by a broadcast wave; an application acquisition unit configured to acquire an application that operates together with the AV content; an application control unit configured to control operation of the application according to a verification result of whether or not the application is trustworthy; an electronic certificate acquisition unit configured to acquire an electronic certificate, transmitted by the broadcast wave, for verifying an electronic signature attached to the application; and an electronic signature verification unit configured to use the electronic certificate to verify the electronic signature attached to the application.

[0013]

The AV content is broadcast content transmitted by a broadcast wave. The reception device further includes an electronic certificate acquisition unit configured to acquire an electronic certificate, transmitted by the broadcast wave, for verifying an electronic signature attached to the application, and an electronic signature verification unit configured to use the electronic certificate to verify the electronic signature attached to the application.

[0014]

The application control unit launches and executes the application only when the application is trustworthy.

[0015]

The electronic certificate is a certificate shared in common with respective channels.

[0016]

The electronic certificate is a different certificate for each channel.

[0017]

An electronic program guide transmitted by the broadcast wave associates an identifier of the electronic certificate with each channel. The electronic certificate acquisition unit acquires, on a basis of the electronic program guide, the electronic certificate from a broadcast wave of a channel corresponding to the identifier of the electronic certificate obtained from the electronic signature attached to the application.

[0018]

The electronic certificate is shared with another electronic device on a same network.

[0019]

The application acquisition unit acquires the application from a designated server via a network.

[0020]

The reception device may be an independent device, or an internal block constituting part of a single device.

[0021]

According to a second aspect of the present invention, there is provided a reception method of a reception device, the reception method comprising : receiving AV content from a broadcaster; acquiring an application that operates together with the AV content; controlling operation of the application according to the verification result of whether or not the application is trustworthy; acquiring an electronic certificate, transmitted by the broadcast wave, for verifying an electronic signature attached to the application; and using the electronic certificate to verify the electronic signature attached to the application.

[0022]

In the reception device and the reception method according to the above aspects of the present invention, AV content is received, an application that operates together with the AV content is acquired, and operation of the application is controlled according to a verification result of whether or not the application is trustworthy.

[0023]

According to a third aspect of the present invention, there is provided a transmission method comprising the steps of: acquiring an electronic certificate for verifying an electronic signature attached to an application that operates together with AV content from a broadcaster; transmitting the electronic certificate together with the AV content from the broadcaster;

acquiring the application; and transmitting the application with the electronic signature attached for determining the application is trustworthy by the electronic certificate verifying the electronic signature attached to the application indicates the application is authorized by the broadcaster of the AV content.

[0024]

The AV content is broadcast content transmitted by a broadcast wave. The electronic certificate is transmitted by the broadcast wave together with the broadcast content.

[0025]

The application is transmitted via a network in response to a request from a receiver.

[0025a]

According to a third aspect of the present invention, there is provided a transmission method comprising: acquiring an electronic certificate, received from a broadcast wave, for verifying an electronic signature attached to an application that operates together with AV content from the broadcast wave; transmitting the electronic certificate together with the AV content from the broadcast wave; acquiring the application with the electronic signature attached; and transmitting the application .

[0026]

In a transmission method according to the above aspect of the present invention, an electronic certificate for verifying an electronic signature attached to an application that operates together with AV content is acquired, the electronic certificate is transmitted together with the AV content, the application with an attached electronic signature is acquired, and the application is transmitted.

Advantageous Effects of Invention

[0027]

According to the above aspects of the present invention, more flexible application usage may be conducted.

Brief Description of Drawings

[0028]

[FIG. 1] FIG. 1 is a diagram illustrating an overview of the present technology.

[FIG. 2] FIG. 2 is a diagram illustrating an example of an application provision method.

[FIG. 3] FIG. 3 is a diagram illustrating an example of a trusted application launching method.

CLAIMS

1. A reception device comprising:
 - a content reception unit configured to receive AV content, the AV content being content transmitted by a broadcast wave;
 - an application acquisition unit configured to acquire an application that operates together with the AV content;
 - an application control unit configured to control operation of the application according to a verification result of whether or not the application is trustworthy;
 - an electronic certificate acquisition unit configured to acquire an electronic certificate, transmitted by the broadcast wave, for verifying an electronic signature attached to the application; and
 - an electronic signature verification unit configured to use the electronic certificate to verify the electronic signature attached to the application.
2. The reception device according to claim 1,
 - wherein the application control unit launches and executes the application only when the application is trustworthy.
3. The reception device according to claim 2,
 - wherein the electronic certificate is a certificate shared in common with respective channels.
4. The reception device according to claim 2,
 - wherein the electronic certificate is a different certificate for each channel.
5. The reception device according to claim 2,
 - wherein an electronic program guide transmitted by the broadcast wave associates an identifier of the electronic certificate with each channel, and
 - wherein the electronic certificate acquisition unit acquires, on a basis of the electronic program guide, the electronic certificate from a broadcast wave of a channel corresponding to the identifier of the electronic certificate obtained from the electronic signature attached to the application.

6. The reception device according to claim 2,
wherein the electronic certificate is shared with another electronic device on a same network.
7. The reception device according to claim 1,
wherein the application acquisition unit acquires the application from a designated server via a network.
8. A reception method of a reception device, the reception method comprising :
receiving AV content, the AV content being content transmitted by a broadcast wave ;
acquiring an application that operates together with the AV content;

controlling operation of the application according to the verification result of whether or not the application is trustworthy;
acquiring an electronic certificate, transmitted by the broadcast wave, for verifying an electronic signature attached to the application; and
using the electronic certificate to verify the electronic signature attached to the application.
9. A transmission method comprising:
acquiring an electronic certificate, received from a broadcast wave, for verifying an electronic signature attached to an application that operates together with AV content from the broadcast wave;
transmitting the electronic certificate together with the AV content from the broadcast wave;
acquiring the application with the electronic signature attached; and
transmitting the application .
10. The transmission method according to claim 9,
wherein the AV content is broadcast content transmitted by the broadcast wave, and
wherein the electronic certificate is transmitted by the broadcast wave together with the broadcast content.

11. The transmission method according to claim 10,
wherein the application is transmitted via a network in response to a request from a receiver.