MOBILE VIDEO COMMERCE SYSTEM USING LIVE VIDEO AND METHOD THEREOF

Technical Field

The present invention relates to video commerce, and more particularly, to a mobile video commerce system using a live video and a method thereof.

Background Art

Electronic commerce (e-commerce) that is a part of electronic business (E-business) means that products or services are purchased or sold in an electronic manner using an Internet or network, and digital technologies. Such e-commerce includes activities, such as advertising, marketing, customer support, delivery, payment, and the like. According to e-commerce, manufacturers and consumers in countries in the world meet each other on a person-to-person basis and can trade with each other without intermediate traders in a virtual market configured of videos and graphics on the Internet, and payment is possible through a credit card or electric money.

In e-commerce, product information can be configured of not a product catalogue including texts or images but videos. This is called video commerce. That is, in video commerce, information regarding a product are exposed to consumers through videos in which a certain person uses the product personally, unlike in the past marketing in which information regarding the product are unilaterally crammed to the consumers, such that feeling of trust is provided to the consumers and the consumers can accept the information regarding the product without repulsion.

However, in the conventional video commerce illustrated in FIG. 1, videos that are previously made in the form of video on demand (VOD), are used as product information such that a method, whereby a seller provides additional information regarding a product in real-time and a consumer obtains the information regarding the product in a current state, is limited.

In addition, in case of T-commerce in which home shopping is performed using a television (TV), the consumer can obtain information regarding the product through a live video, and a live video for the product can be made only in a limited environment in which predetermined broadcasting apparatuses are installed.

As the usage of smartphones is widely spread, the live video can be easily made without temporal and spatial limitations everywhere in the world. Thus, a mobile video commerce system using a live video made in this manner is required.

Disclosure of the Invention

The present invention provides a mobile video commerce system using a live video in which real-time information regarding a product can be provided through a live video made using a seller's mobile terminal device and product inquiry information are transmitted to a seller mobile terminal device from a consumer mobile terminal device through a chatting function so that a real-time reply to product inquiry can be performed, and a method thereof.

According to an aspect of the present invention, there is provided a mobile video commerce system using a live video, including: a commerce server configured to register a broadcasting address of a corresponding live video together with product information regarding a predetermined product and to perform transaction and payment for the predetermined product; a seller mobile terminal device configured to select a seller's predetermined product registered in the commerce server and to make a live video corresponding to the selected seller's predetermined product; a live server configured to receive the live video made by the seller mobile terminal device via a wireless Internet and to perform broadcasting on the live video via the wireless Internet in real time; and a consumer mobile terminal device configured to select a predetermined product registered in the commerce server, to receive product information corresponding to the selected predetermined product from the commerce server, to receive a live video corresponding to the selected predetermined product form the live server, and to output the received product information and the received live video.

According to another aspect of the present invention, there is provided a mobile video commerce method using a live video, including: (a) selecting a seller's predetermined product registered in a commerce server and making a live video corresponding to the selected seller's predetermined product, using a seller mobile terminal device; (b) registering a broadcasting address of a live video corresponding to the predetermined product, using the commerce server; (c) receiving the live video

made by the seller mobile terminal device via a wireless Internet and performing broadcasting on the live video via the wireless Internet in real time, using the live server; and (d) selecting a predetermined product registered in the commerce server, receiving product information corresponding to the selected predetermined product from the commerce server, receiving a live video corresponding to the selected predetermined product from the live server, and outputting the received product information and the received live video, using the consumer mobile terminal device.

Brief Description of the Drawings

FIG. 1 is a schematic view of a configuration of a video commerce system according to the related art;

FIG. 2 is a view illustrating a configuration of a mobile video commerce system using a live video according to an embodiment of the present invention;

FIG. 3 illustrates an operation of performing real-time broadcasting on a live video according to the present invention;

FIG. 4 is a flowchart illustrating an operation performed by a seller during the operation of performing real-time broadcasting on a live video;

FIGS. 5A through 5D illustrate a user interface screen of a seller mobile terminal device; FIG. 5A illustrates an initial screen for starting live video broadcasting, FIG. 5B illustrates a screen for selecting a product to be broadcasted in a commerce server, FIG. 5C illustrates a screen on which live video broadcasting is being performed, and FIG. 5D illustrates a screen for outputting chatting information from a consumer during live video broadcasting;

FIG. 6 is a flowchart illustrating an operation performed by a consumer during the operation of performing real-time broadcasting on a live video;

FIG. 7A illustrates a screen of a consumer mobile terminal device for selecting a live product, FIG. 7B illustrates a screen of the consumer mobile terminal device for product purchase or shopping basket registration, FIG. 7C illustrates a screen of the seller mobile terminal device on which real-time notification information regarding purchase determination information are displayed, and FIG. 7D illustrates a screen of the consumer mobile terminal device for inputting product inquiry information to a seller while watching live video broadcasting;

FIG. 8 illustrates an operation of performing broadcasting on a video on demand (VOD) video according to the present invention; and

FIG. 9 is a flowchart illustrating an operation performed by a consumer during the operation of performing broadcasting on the VOD video.

Best mode for carrying out the Invention

The present invention will now be described more fully with reference to the accompanying drawings, in which exemplary embodiments of the invention are shown.

Referring to FIG. 2, a mobile video commerce system using a live video according to an exemplary embodiment of the present invention includes a seller mobile terminal device 10, a commerce server 20, a live server 30, a chatting server 40, a recording server 50, a video on demand (VOD) server 60, and a consumer mobile terminal device 70.

The commerce server 20 is connected to the seller mobile terminal device 10 and the consumer mobile terminal device 70 via a wireless Internet (not shown), thereby performing transaction and payment on a product to be sold by a seller. Product information about the product to be sold by the seller are registered in the commerce server 20. A broadcasting address of a live video is together registered in each product.

The seller mobile terminal device 10 that is a terminal device of the seller or a person who is appointed by the seller to sales activities, selects the seller's predetermined product registered in the commerce server 20 and makes a live video corresponding to the selected seller's predetermined product. In this case, the live video is preferably made by the seller mobile terminal device 10 according to a real time messaging protocol (RTMP) or a real time streaming protocol (RTSP). The seller mobile terminal device 10 is connected to another element via the wireless Internet and thus can make a live video without limitations in time and place.

The live server 30 receives the live video made by the seller mobile terminal device 10 via the wireless Internet and performs broadcasting on the live video in real time via the wireless Internet. In this case, the live server 30 preferably converts the live video made according to the RTMP or RTSP into a real-time live streaming through hypertext transfer protocol live streaming (HLS) or hypertext transfer protocol dynamic

streaming (HDS), and performs broadcasting on the real-time live streaming in real time.

The recording server 50 is a digital video recorder (DVR) that records a video broadcasted by the live server 30. In addition, for a product of which live video broadcasting is terminated, the VOD server 60 provides the video recorded by the recording server 50 regarding to the product, instead of a live video, to the consumer mobile terminal device 70. In this case, an address of the recorded VOD video instead of a broadcasting address of a live video corresponding to a predetermined product is together registered in the commerce server 20.

The consumer mobile terminal device 70 selects a predetermined product registered in the commerce server 20, receives product information corresponding to the selected predetermined product from the commerce server 20, receives a live video corresponding to the selected predetermined product from the live server 30, and outputs the received product information and the received live video. When live video broadcasting corresponding to the product registered in the commerce server 20 is terminated, the consumer mobile terminal device 70 receives the VOD video corresponding to the selected predetermined product from the VOD server 60 and outputs the product information received from the commerce server 20 and the VOD video received from the VOD server 60. When a user requests a VOD video, the consumer mobile terminal device 70 can request a video file in several file formats (ranged from low resolution of 320 x 480 and high resolution of high definition (HD) 1080 Pi) according to a state of a network. In addition, during real-time transmission, the consumer mobile terminal device 70 supports an adaptive bitrate at which a RTMP bitrate is changed according to the state of the network, and RTMP full HD 1080P, and during broadcasting recording of a terminal device, RTMP encoding or RTMP shooting, when the user touches the consumer mobile terminal device 70, the consumer mobile terminal device 70 can also perform focusing.

The commerce server 20 includes a recommendation algorithm 22 for recommending a seller to a predetermined consumer. The consumer can register himself/herself as a follower for the seller recommended through the recommendation algorithm 22. Thus, when the seller's seller mobile terminal device 10 starts live video making, the commerce server 20 transmits broadcasting notification to the consumer

mobile terminal device 70 of the consumer who is registered as the follower of the seller recommended through the recommendation algorithm 22. The consumer can receive broadcasting notification, select a corresponding product, and watch live video broadcasting using his/her own consumer mobile terminal device 70.

When the consumer mobile terminal device 70 watches live video broadcasting, the chatting server 40 creates a chat room for the consumer mobile terminal device 70 and the seller mobile terminal device 10, and when the chatting server 40 receives product inquiry information from the consumer mobile terminal device 70, the chatting server 40 stores the received product inquiry information in a database 42 as chatting information, and simultaneously transmits the product inquiry information to the seller mobile terminal device 10 that makes a live video.

The chatting information includes real-time notification information regarding shopping basket treatment information and purchase determination information, which are provided by the consumer mobile terminal device 70 to the commerce server 20 for transaction, as well as the product inquiry information.

When the consumer mobile terminal device 70 receives the VOD video from the VOD server 60, the chatting server 40 searches for chatting information corresponding to the VOD video from among the chatting information stored in his/her own database 42, transmits the searched chatting information to the consumer mobile terminal device 70, and outputs the chatting information together with the VOD video.

Hereinafter, an operation of performing real-time broadcasting on a live video using the mobile video commerce system using the live video according to the present invention will be described with reference to FIG. 3.

The seller mobile terminal device 10 starts live broadcasting by selecting a product to be broadcasted from among the seller's products registered in the commerce server 20 (①). That is, when the seller mobile terminal device 10 makes a live video corresponding to the selected product, the live video is transmitted to the live server 40 via the wireless Internet (②). The live server 30 preferably converts the live video made by the seller mobile terminal device 10 according to the RTMP or RTSP into a real-time live streaming through HLS or HDS and performs broadcasting on the real-time live streaming via the wireless Internet in real time. A broadcasting address of the live video broadcasted by the live server 30 is registered together with the

product information regarding the product of the commerce server 20.

The commerce server 20 recommends a seller to a predetermined consumer using the recommendation algorithm 22. The consumer can register himself/herself as a follower for the seller recommended by the commerce server 20. When the seller's seller mobile terminal device 10 starts live video making, the commerce server 20 sends broadcasting notification to the consumer mobile terminal device 70 of the consumer who is registered as the seller's follower (③).

When the consumer receives broadcasting notification and selects the product using his/her own consumer mobile terminal device 70 (④), the consumer can watch live video being broadcasted in the live server 30 using the broadcasting address of the live video registered together with the product information regarding the product (⑤).

When the consumer mobile terminal 70 watches live video broadcasting, the chatting server 40 creates a chat room for the consumer mobile terminal device 70 and the seller mobile terminal device 10.

When the consumer inputs product inquiry information using the chat room for the consumer mobile terminal device 70(⑥), the chatting server 40 stores the input product inquiry information in the database 42 as chatting information (⑦) and simultaneously transmits the product inquiry information to the seller mobile terminal device 10 that makes a live video (⑧).

Then, the seller can check the product inquiry information output by the seller mobile terminal device 10, make a live video including a reply to product inquiry, and transmit the live video to the consumer.

When the consumer wants to purchase the product, the consumer mobile terminal device 70 transmits purchase determination information to the commerce server 20 (⑨).

The chatting information transmitted to the seller mobile terminal device 10 from the consumer mobile terminal device 70 may include real-time notification information regarding shopping basket treatment information and purchase determination information, which are provided by the consumer mobile terminal device 70 to the commerce server 20 for transaction, as well as the product inquiry information.

An operation performed by the seller during the operation of performing

broadcasting on the live video in real time will be described with reference to FIG. 4.

First, the seller selects a product to be broadcasted from among the seller's products registered in the commerce server 20 using the seller mobile terminal device 10 and starts live broadcasting in response to the selected product (S110). FIG. 5A illustrates an initial screen of the seller mobile terminal device 10 for starting live video broadcasting, FIG. 5B illustrates a screen of the seller mobile terminal device 10 for selecting a product to be broadcasted in the commerce server 20, and FIG. 5C illustrates a screen of the seller mobile terminal device 10 on which live video broadcasting is being performed.

Subsequently, the commerce server 20 sends broadcasting notification to the consumer mobile terminal device 70 (S120), and when the consumer mobile terminal device 70 watches a live video being broadcasted, a chat room between the consumer mobile terminal device 70 and the seller mobile terminal device 10 is created by the chatting server 40 (S130).

Subsequently, the seller can check the product inquiry information output by the seller mobile terminal device 10 until broadcasting is terminated, and can transmit a description of the product and a reply to product inquiry to the consumer using the live video (S140, S150). FIG. 5D illustrates a screen of the seller mobile terminal device 10 for outputting chatting information from the consumer during live video broadcasting.

An operation performed by the consumer during the operation of performing broadcasting on the live video in real time will be described with reference to FIG. 6.

First, the consumer can receive broadcasting notification from the commerce server 20 using the consumer mobile terminal device 70, select a live product, and watch a live video being broadcasted (S200, S210). In this case, a chat room between the consumer mobile terminal device 70 and the seller mobile terminal device 10 is created by the chatting server 40, and the consumer can enter the chat room (S220). FIG. 7A illustrates a screen of the consumer mobile terminal device 70 for selecting a live product.

Subsequently, a procedure regarding whether to purchase a product and a procedure regarding whether to inquiry the product are performed until broadcasting is terminated (S230, S240, S270).

When the consumer selects product purchase using the consumer mobile

terminal device 70, real-time notification information regarding purchase determination information are transmitted to the seller mobile terminal device 10 through the chatting server 40 (S250), and the commerce server 20 performs product order or interest product registration (S260). FIG. 7B illustrates a screen of the consumer mobile terminal device 70 for product purchase or shopping basket registration, and FIG. 7C illustrates a screen of the seller mobile terminal device 10 on which real-time notification information regarding the purchase determination information are displayed.

When the consumer inputs product inquiry information using the consumer mobile terminal device 70, the product inquiry information are transmitted to the seller mobile terminal device 10 that makes a live video (S280). FIG. 7D illustrates a screen of the consumer mobile terminal device 70 for inputting product inquiry information to the seller while watching live video broadcasting.

Hereinafter, an operation of performing broadcasting on a VOD video using the mobile video commerce system using the live video according to the present invention will be described with reference to FIG. 8.

For a predetermined product of which live video making is terminated, instead of the live video, the VOD video recorded by the recording server 50 for the product is provided as a live streaming video through HLS or HDS. In this case, an address of the recorded VOD video instead of a broadcasting address of the live video corresponding to the product is registered together with product information.

The commerce server 20 recommends the seller's predetermined product to a predetermined consumer using the recommendation algorithm 22 (ⓐ).

When the consumer selects a product recommend by recommendation of the recommendation algorithm 22 (ⓑ), the consumer mobile terminal device 70 can receive the recorded VOD video from the VOD server 60 in the format of a live streaming video through HLS or HDS using the address of the VOD video registered together with the product information about the product (ⓒ).

In this case, the chatting server 40 transmits the chatting information stored in the database 42 to the consumer mobile terminal device 70 such that product inquiry and a reply to the product inquiry, which have been performed while live video broadcasting is performed, can be checked again (ⓓ).

When the consumer wants to purchase the product, the consumer mobile

terminal device 70 transmits purchase determination information to the commerce server 20 (ⓔ).

An operation performed by a consumer during the operation of performing broadcasting on the VOD video will be described with reference to FIG. 9.

First, the consumer can select a VOD product through recommendation from the commerce server 20 using the consumer mobile terminal device 70 and watch corresponding VOD video broadcasting (S300, S310). In this case, the consumer mobile terminal device 70 receives chatting information corresponding to the VOD video from among the chatting information stored in the database 42 from the chatting server 40 and outputs the received chatting information together with the VOD video (S320).

Subsequently, a procedure regarding whether to purchase the product is performed until broadcasting is terminated (S330, S340).

When the consumer selects product purchase using the consumer mobile terminal device 70, the commerce server 20 performs product order and interest product registration (S350).

While the present invention has been particularly shown and described with reference to exemplary embodiments thereof, it will be understood by those of ordinary skill in the art that various changes in form and details may be made therein without departing from the spirit and scope of the present invention as defined by the following claims.

Industrial Applicability

According to the present invention, real-time information regarding a product can be provided using a live video made using a seller's mobile terminal device so that the seller can provide information regarding the product in the format of a live video without temporal and spatial limitations and a reply to product inquiry information can be provided through a chatting function in real time.

CLAIMS

1. A mobile video commerce system using a live video, comprising:

a commerce server configured to register a broadcasting address of a corresponding live video together with product information regarding a predetermined product and to perform transaction and payment for the predetermined product;

a seller mobile terminal device configured to select a seller's predetermined product registered in the commerce server and to make a live video corresponding to the selected seller's predetermined product;

a live server configured to receive the live video made by the seller mobile terminal device via a wireless Internet and to perform broadcasting on the live video via the wireless Internet in real time; and

a consumer mobile terminal device configured to select a predetermined product registered in the commerce server, to receive product information corresponding to the selected predetermined product from the commerce server, to receive a live video corresponding to the selected predetermined product form the live server, and to output the received product information and the received live video.

2. The mobile video commerce system of claim 1, further comprising a chatting server configured to receive product inquiry information from the consumer mobile terminal device and to transmit the product inquiry information to the seller mobile terminal device that makes the live video.

3. The mobile video commerce system of claim 1, further comprising:

a recording server configured to record a video broadcasted by the live server; and

a video on demand (VOD) server configured to provide the recorded video recorded by the recording server, for a predetermined product of which live video making is terminated.

4. The mobile video commerce system of claim 1, wherein the live video is made by the seller mobile terminal device according to a real time messaging protocol (RTMP) or a real time streaming protocol (RTSP), and

the live server converts the live video made according to the RTMP or RTSP into a real-time live streaming through hypertext transfer protocol live streaming (HLS) or hypertext transfer protocol dynamic streaming (HDS) and performs broadcasting on the real-time live streaming in real time.

5. The mobile video commerce system of claim 1, wherein the commerce server comprises a predetermined recommendation algorithm for recommending a seller to a predetermined consumer, and when the seller's seller mobile terminal device starts live video making, the commerce server transmits broadcasting notification to the consumer mobile terminal device of a consumer who is registered as a follower of the seller recommended through the recommendation algorithm.

6. A mobile video commerce method using a live video, comprising:

(a) selecting a seller's predetermined product registered in a commerce server and making a live video corresponding to the selected seller's predetermined product, using a seller mobile terminal device;

(b) registering a broadcasting address of a live video corresponding to the predetermined product, using the commerce server;

(c) receiving the live video made by the seller mobile terminal device via a wireless Internet and performing broadcasting on the live video via the wireless Internet in real time, using the live server; and

(d) selecting a predetermined product registered in the commerce server, receiving product information corresponding to the selected predetermined product from the commerce server, receiving a live video corresponding to the selected predetermined product from the live server, and outputting the received product information and the received live video, using the consumer mobile terminal device.

7. The mobile video commerce method of claim 6, further comprising (e) receiving product inquiry information from the consumer mobile terminal device and transmitting the product inquiry information to the seller mobile terminal device that makes the live video, using the chatting server and outputting the product inquiry information, using the seller mobile terminal device.

8. The mobile video commerce method of claim 6, wherein (c) further comprises recording the video broadcasted by the live server, using a recording server including a digital video recorder (DVR), and

(d) comprises, for the predetermined product of which live video making is terminated, receiving the recorded video corresponding to the selected predetermined product from the VOD server and outputting the video.

9. The mobile video commerce method of claim 6, wherein (c) comprises converting the live video made by the seller mobile terminal device according to a real time messaging protocol (RTMP) or a real time streaming protocol (RTSP) into a real-time live streaming through hypertext transfer protocol live streaming (HLS) or hypertext transfer protocol dynamic streaming (HDS) and performing broadcasting on the real-time live streaming in real time, using the live server.

10. The mobile video commerce method of claim 6, wherein (b) further comprises, when the seller’s seller mobile terminal device starts live video making, transmitting broadcasting notification to the consumer mobile terminal device of a consumer who is registered as a follower of the seller recommended through a recommendation algorithm, using the commerce server.