An ornament with multimedia messages transmission includes a shell, a camera, a displaying unit and an audio device. The shell has an image projecting area mounted with a lens. The displaying unit is arranged in the shell behind the lens for projecting images thereon. The audio device is able to play sound. The camera is arranged above the image projecting area for taking images and data are transmitted to a microprocessor. The microprocessor acquires audiovisual data from a multimedia data storage unit and transmits the data to the displaying unit and the audio device. The ornament is connected to a computer for storing the data to the computer, transmitting the data to the internet through the computer or downloading data from the computer. A plurality of buttons are used to control the operation of the camera, the audio device, the displaying unit and other functions.
FIG. 2
ORNAMENT WITH MULTIMEDIA MESSAGE TRANSMISSION

FIELD OF THE INVENTION

[0001] The present invention relates to an audiovisual playing device, and in particular to an ornament with multimedia message transmission capable to take pictures and play audiovisual data.

BACKGROUND OF THE INVENTION

[0002] During holiday seasons, to add glitz and glamour to season’s joy, stores are decorated with occasional articles of all kinds. Among them, there are some indispensable items of hanging ornaments, such as crystal balls and artistic lanterns with glittery appearances that spark amusement and curiosity.

[0003] Lovely toy figurines have always played an important role in human life. Characters like Hello Kitty Cat and Pokemon Pikachu are loved by fans, young and old, and even unleash a flurry of panic buying. To cater to the need of those who are too busy to record the numerous and diverse things in the hustle and bustle of lives, there are some products capable of recording messages and possess attractive character appearances. For example, a decoration is disclosed in Taiwan Utility Model Publication No. TW 471664, which comprises a main body and an internal processing unit. The main body comprises a computer connection port, a telephone connection port, a recording device and an audio output connection port. The computer connection port may be connected to an external computer or Internet, so as to allow the user to manage his schedule and input data at the first timing. The internal processing unit is respectively coupled with the computer connection port, the telephone connection port, the recording device and the audio output connection port, for processing the data inputted through the computer connection port or the telephone connection port and storing data to the recording device. In the meantime, the processed data are converted to audio signals and transmitted through the audio output connection port to an audio device to generate a voice message to remind the user at the preset time.

[0004] However, the conventional hanging ornaments are limited to provide decoration with their novel looks, and they bear no additional functions. Although the ornament possessing secretarial functions as disclosed in TW 471664 is able to record, play and store audio signals in the data storage, it is not able to generate and display visual data.

[0005] On the other hand, the conventional apparatus that are used for multimedia message transmissions (such as cameras, MP3, digital voice recorders, camera cell phones, etc.) do not provide ornamental function. It is desired to provide an ornament that can provide multimedia transmission functions.

SUMMARY OF THE INVENTION

[0006] Therefore, a primary object of the present invention is to provide an ornament that is capable to provide multimedia message transmission as well as ornamental function. The ornament can record, store and play audio and visual data at the same time.

[0007] Another object of the present invention is to provide a new design for an audiovisual apparatus for taking images and playing multimedia data.

[0008] By using the technique disclosed in the present invention, the conventional monotonous ornaments become very amusing, giving a sense of lively visual and sound effect, adding glamour to the holiday season. Also, the present invention allows the users to take images and to send messages comprising images and sounds to others through a computer. The present invention comprises a new structure for transmitting multimedia messages.

[0009] To fulfill the above objects, the present invention provides an ornament with multimedia message transmission. The ornament comprises a shell, a camera, a displaying unit and an audio device. The shell has an image projecting area mounted with a lens. The displaying unit is arranged in the shell behind the lens for projecting images to the lens. The audio device arranged in the shell is able to play sound. The camera is arranged above the image projecting area for taking images and data are transmitted to a microprocessor of a control circuit. The microprocessor acquires audiovisual data from a multimedia data storage unit and transmits the audiovisual data to the displaying unit and the audio device. The shell can be connected to a computer through a USB slot for storing the data to the computer, transmitting the data to the Internet through the computer or download data from the computer. A plurality of buttons are provided at the shell for controlling the operation of the camera, the audio device, the displaying unit and other functions.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] The present invention will be apparent to those skilled in the art by reading the following detailed description of preferred embodiment thereof, with reference to the attached drawings, in which:

[0011] FIG. 1 is a perspective view of a first embodiment of an ornament with multimedia messages transmission constructed in accordance with the present invention;

[0012] FIG. 2 is a perspective view from another side of the ornament with multimedia message transmission of FIG. 1;

[0013] FIG. 3 is a cross-sectional view taken along line 3-3 of FIG. 1;

[0014] FIG. 4 is a schematic view showing that a plurality of the ornaments with multimedia message transmission constructed in accordance with the first embodiment of the present invention are hung on a Christmas tree;

[0015] FIG. 5 shows a block diagram of a control circuit of the ornament of the present invention; and

[0016] FIG. 6 is a front elevational view of a second embodiment of the ornament with multimedia message transmission constructed in accordance with the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0017] Please refer to FIGS. 1 to 3 that show an ornament with multimedia message transmission, constructed in accordance with a first embodiment of the present invention. The ornament with multimedia message transmission of the present invention, generally designated with reference numeral 100, comprises a shell 1, a lens 2, a circuit board 3, a displaying unit 4, an audio device 5, a camera 6 and a power supply 7.

[0018] The top of the shell 1 is provided with a hanging member 11 for the users to hang the ornament with multimedia message transmission of the present invention 100 onto an object. The hanging member 11 may comprise a hook, a ring, a sucking disc or any structure that can be hung or fastened to any object.
The front side of the shell 1 is provided with an approximately rectangular opening to form an image projecting area 12. The lens 2 is mounted to the image projecting area 12 of the shell 1. At a predetermined position at the backside of the shell 1, the shell 1 is perforated with a plurality of sound transmission holes 13 which allow the transmission of sound to the surrounding. The audio device 5 is arranged in the cavity of the shell 1 and faces to the sound transmission hole 13. Moreover, right above the image projecting area 12 of the front side of the shell 1 is provided with an image-taking area 14. The camera 6 is arranged in the cavity with the camera lens directing towards the image-taking area 14 of the shell 1 for taking pictures from the front side. The camera 6 is coupled with the circuit board 3.

The circuit board 3 is accommodated in the cavity of the shell. The displaying unit 4 is arranged at a predetermined location of the circuit board 3 and projects forward to the front side of the shell 1 through the lens 2. Accordingly, the user can view the images projecting by the displaying unit 4 to the lens 2 at the image projecting area 12. The audio device 5 is arranged in the cavity of the shell 1 and faces to the sound transmission hole 13 for transmitting sound therethrough. The audio device 5 is electrically connected to the circuit board 3 by wires. The power supply 7 is mounted to a selected location of the circuit board 3 to supply power to the circuit board 3. The power supply 7 may comprises a rechargeable battery.

Furthermore, a plurality of buttons 15 are provided at the shell 1 below the image projecting area 12. The buttons 15 are electrically connected to the circuit board 3 by wires. A cover 16 is pivotally or removable mounted to the other side of the shell 1 opposite to the image projecting area 12. The users can open the cover 16 to replace the battery 7. A USB slot 17 is arranged at the shell 1 below the cover 16, which is electrically connected to the circuit board 3 by wire.

Referring to FIG. 4, it is shown that a plurality of the ornaments with multimedia message transmission constructed in accordance with the first embodiment of the present invention 100 are hung on a Christmas tree 8. The ornaments 100 can be hung to any desired positions of the Christmas tree 8 by fastening the hanging member 11. Multimedia messages are transmitted to the users by displaying images through the displaying unit 4 and playing sound through the audio device 5. That is to say, the users are allowed to view the image data shown by the displaying unit 4 through the lens 2 and listen to music or reminders played through the audio device 5. Further, the users can control the buttons 15 to control the ornament 100 to take images by the camera 6, to display a desired images or to play a desired music by the audio device 5.

As shown in FIG. 5 which shows a block diagram of a control circuit of the ornament of the present invention. The control circuit comprises a multimedia data storage unit 31 and a microprocessor 32. The multimedia data storage unit 31 and microprocessor 32 are arranged at predetermined locations of the circuit board 3. The microprocessor 32 is connected to the multimedia data storage unit 31, the displaying unit 4, the audio device 5, the camera 6, the power supply 7, the buttons 15 and the USB slot 17, respectively. The microprocessor 32 controls the operation of these components and the transmission of signals among these components.

The multimedia data storage unit 31 is used to store visual data and audio data. The microprocessor 32 reads the data stored in the multimedia data storage unit 31, and transmits the visual data e.g., images to the displaying unit 4 and drives the displaying unit 4 to display the images. The microprocessor 32 also acquires the audio data from the multimedia data storage unit 31, and transmits the audio data e.g., reminders or music to the audio device 5 and drives the audio device 5 to play the audio data.

The user turns on or turns off the ornament 100 by pressing the buttons 15 and operates the audiovisual playing functions of the ornament through the buttons 15. The users can control the camera 6 via the microprocessor 32 to take images, and store the images in the multimedia data storage unit 31. Also, the user can control the audio device 5 to play music.

The USB slot 17 allows insertion of a USB flash drive 171 which may be connected through a transmission cord 172 to a computer 9. Via the USB slot 17, data can be transmitted between the ornament 100 of the present invention and the computer 9 and through the computer 9 to the internet. That is, the users can use the computer 9 to upload and store the visual data and audio data in the multimedia data storage unit 31 to the computer 9 or download the multimedia data, schedule and any desired data from the computer 9 to the multimedia data storage unit 31 of the ornament 100 of the present invention.

FIG. 6 is a front elevational view of a second embodiment of the ornament with multimedia message transmission. The ornament 100a of the second embodiment is similar to that of the first embodiment, and, therefore, same structural members are designated with the same numerals.

In the second embodiment, the buttons 15 are designed to have different, specific and aesthetic shapes. The ornament 100a further comprises some decorative accessories mounted to the shell 1 to generate a whole beautiful appearance. In the second embodiment, the ornament 100a is also provided with two artistic accessories 18 at predetermined locations of the shell 1. In the figure, the accessories 18 resemble a pig ear and are mounted to an upper part of the shell 1. Also, the shell 1 is painted with designed drawings 19 above the image-taking area 14. In the embodiment, the drawings 19 resemble pig eyes. As a whole, the buttons 15, the accessories 18 and the drawings 19 make the ornament 100a of the second embodiment look like an animal in appearance, such as a pig. The ornament may be designed to have various and different appearances. To match a design, the shell 1 may be any shape and configuration, and comprises assorted accessories and painted with assorted drawings.

Although the present invention has been described with reference to the preferred embodiment thereof, it is apparent to those skilled in the art that a variety of modifications and changes may be made without departing from the scope of the present invention which is intended to be defined by the appended claims.

What is claimed is:
1. An ornament, comprising:
a shell, which is provided with an opening to form an image projecting area;
a lens, which is mounted to the image projecting area of the shell;
a displaying unit, which is arranged behind the lens and which projects images forward to the lens to display images thereon;
a circuit board, which is arranged in the shell, comprising: a multimedia data storage unit, which is used to store a plurality of visual data; and
a microprocessor, which is connected to the multimedia data storage unit and the displaying unit, for acquiring visual data stored in the multimedia data storage unit, transmitting the visual data to the displaying unit and controls the displaying unit to display images.

2. The ornament as claimed in claim 1, wherein the shell of the ornament is provided with at least one sound transmission hole for transmission of sound.

3. The ornament as claimed in claim 2, wherein the ornament further comprises an audio device which is arranged in the shell facing to the sound transmission hole for playing audio data and which is connected to the microprocessor for receiving signals from the microprocessor.

4. The ornament as claimed in claim 3, wherein the audio data are stored in the multimedia data storage unit and the microprocessor acquires the audio data from the multimedia data storage unit, transmits the audio data to the audio device and controls the audio device to play the sound.

5. The ornament as claimed in claim 1, wherein the shell is perforated with an image-taking area at a predetermined position of the shell.

6. The ornament as claimed in claim 5, wherein the ornament further comprises a camera which is mounted to the cavity of the shell with the camera lens directing towards the image-taking area for taking pictures from the surrounding, and which is connected to the microprocessor for transmitting signals to and receiving signals from the microprocessor.

7. The ornament as claimed in claim 1, wherein a USB slot is arranged at the shell and is connected to the microprocessor for transmission of data.

8. The ornament as claimed in claim 1, wherein the ornament further comprises a plurality of buttons for the user to control the ornament and the buttons are connected to the microprocessor.

9. The ornament as claimed in claim 1, wherein the ornament further comprises a power supply for supplying power and the power supply is connected to the microprocessor.

10. The ornament as claimed in claim 1, wherein the lens is a convex lens.

11. The ornament as claimed in claim 1, wherein a hanging member is arranged at a predetermined position of the shell for hanging.

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