

AI DISPLAYING OF NETWORK BROADCASTING SYSTEM HAVING SCENE MANAGEMENT

BACKGROUND OF THE INVENTION

1. FIELD OF THE INVENTION

The present invention relates to a network broadcasting system, and more especially, to an AI (artificial intelligent) displaying of network broadcasting system having scene management.

2. BACKGROUND OF THE RELATED ART

The billboard has been an excellent information transmitting media in the human society for a long time. Although the technologies progress along the times, the information interchange function of the billboard at the place including school, company, office, community, shopping mall, mass transmit vehicle, etc., is not declined. And because of the business activity and the strong demand in the social groups, the displaying media have getting more various types in use than before, and more applications are developed at different places.

The LED (light-emitting diode) display is one kind of billboard invented through material innovation in the technology trend.

Bright dazzle colored LEDs show that the FPD (flat panel display) cannot merely display with various color expressing information but also display high chroma, high brightness, high resolution in the picture and characters, and even dynamically displaying the information characteristic.

The high reality sense brought by LED surpasses the traditional billboard does. In addition, the LED display is often equipped with a speaker which can demonstrate the three-dimensional stereo effect and reality sense, for the purpose of propagating it is apt to induce the sympathetic response of the person who accepts information. But the information that the billboard or the LED display shows still remains a one-way transmitting, and only the specific person and group's organization have the access right of creating, making and propagating information.

In addition, the rise of the Internet has brought a convenient way for the information to transmit. Every individual can use the end user device, for instance, PC, notebook computer, Tablet PC, cell-phone or PDA, etc., to make his own information content he want to transmit or display.

SUMMARY OF THE INVENTION

Embodiments of the present invention provide an AI (artificial intelligent) displaying of

network broadcasting system having scene management. The users link to communication system, such as the Internet, telecom, or wireless network, to transmit the video, sound or information they want to express. And an AI workstation cluster processes all the information from the users to output a program schedule which is transferred to the displays. The AI workstation cluster schedules the program according some environmental parameters generated by various detectors, sensors and input units in the display.

The AI displaying of network broadcasting system connects plural displays via a network to manage the individual displaying or group broadcasting.

The AI displaying of network broadcasting system has an AI workstation cluster to receive the broadcasting messages from each of the end-user devices and process them to output a program schedule without man control.

In particular, the AI displaying of network broadcasting system uses the AI workstation cluster to let the person or group to use the system to wirelessly transmit and efficiently monitor the broadcasting content immediately

Accordingly, one embodiment of the present invention provides an AI displaying of network broadcasting system having scene management, comprising: a plurality of end-user devices receiving broadcasting information inputted from users and transferring the broadcasting information through a plurality of communication

links; a plurality of displays dynamically displaying broadcasting program according to some specific or environmental conditions, the displays sensing environmental changes to generate a plurality of environmental variables; and an AI workstation cluster connecting to the end-user devices via the communication links to receive the broadcasting information, the artificial intelligent (AI) workstation cluster comprising: at least one user management interface receiving and processing the broadcasting information to make a program schedule; an artificial intelligent control unit connecting to the displays and controlling the individual or group broadcasting to the displays.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG.1 is a functional block diagram illustrating an AI displaying of network broadcasting system in accordance with an embodiment of the present invention.

FIG.2 is a functional block diagram illustrating an AI displaying of network broadcasting system in accordance with an embodiment of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

FIG.1 is a functional block diagram illustrating an AI displaying of network broadcasting system in accordance with an embodiment of the present invention. The network broadcasting system

includes: some end-user devices 11, 12, 13, 14 receiving broadcasting information (content) inputted from users and transferring the broadcasting information through different communication links; some displays 31, 32, 33, 34, dynamically displaying broadcasting program according to some specific or environmental conditions, the displays 31, 32, 33, 34 sensing environmental changes to generate various environmental parameters; and an artificial intelligent (AI) workstation cluster 20 connecting with those end-user devices 11, 12, 13, 14 via the communication links to receive the broadcasting information. The AI workstation cluster 20 includes: a user management interface 203 receiving and processing the broadcasting information from the end-user devices 11, 12, 13, 14 to make a program schedule; and an AI (artificial intelligent) control unit 202 connecting to the displays 31, 32, 33, 34 and controlling the individual or group broadcasting among the displays 31, 32, 33, 34. In addition, the AI workstation cluster 20 has a website 201 for processing customers' information and the broadcasting content.

Accordingly, the end-user devices 11, 12, 13, 14 may utilize the telecom network, the fiber network, the Internet, the LAN network and the wireless network to transfer information. It is very convenient and cheap for customers to post advertisements and messages. Besides that the AI control unit 202 monitors the displays 31, 32, 33, 34 simultaneously, it will reduce the maintenance cost with minimum error occurred. The displays 31, 32, 33, 34 may be the LED (light-emitting diode) display, the LCoS

display, the LCD display, the PDP display, the OLED (organic light-emitting diodes) display or the CRT display.

FIG.2 is a functional block diagram illustrating an AI displaying of network broadcasting system in accordance with an embodiment of the present invention. The network broadcasting system includes: some end-user devices 40, such as PC 41, fax machine 42, telephone 43 and mobile phone 44; an AI (artificial intelligent) workstation cluster 50; and the LED displays 61, 62, 63, 64. The customer uses end-user devices 40 to input the broadcasting information (content) which then transferred to the AI workstation cluster 50.

The AI workstation cluster 50 includes a website 501, an artificial intelligent (AI) control unit 502, and a user management interface 503. The website 501 processes customers' broadcasting information. The user management interface 503 receives and processes the broadcasting information to make a program schedule. And the AI control unit 502 connects to the LED displays 61, 62, 63, 64 and controls the individual or group broadcasting among the LED displays 61, 62, 63, 64. Additionally, the way of transferring information from AI control unit 502 to the LED displays 61, 62, 63, 64 is via the wire or wireless communication.

Accordingly, the website 501 already has the style frames and forms for customers to edit and apply the content for accepting

information directly. After receiving the content the customers want to broadcast, the system calculates time period and replies the customer's request of confirmation and then asks the time and the place to broadcast, it may be a scene broadcasting according to the on-site situation, or the system may broadcast at a fixed place and time. The customers may inquire about the timetable and content in the website 501 or use fax machine, indoor telephone or mobile telephone, etc. for inquiry.

Furthermore, the LED display further has a scene management module sensing and detecting environmental changes to generate some environmental parameters for the AI control unit 502 of AI workstation cluster 50. The scene management module includes: an image monitoring unit receiving visual signal of surrounding environment, such as the CCD (charge-coupled device) or CMOS image sensor; an sound detecting unit receiving audio signal of the surrounding environment, such as a microphone; a temperature measuring unit receiving and measuring temperature changes of the surrounding environment, such as NTC (negative temperature coefficient) sensor; an stream estimating unit estimating the quantity of moving objects in the displaying zone, such as IrDA (Infrared Data. Association) sensor; and an input device receiving the input information from the user nearby, such as the keyboard, the touch PAD or the touch screen.

Accordingly, the scene management module makes the LED displays 61, 62, 63, 64 receive some environmental conditions or human activities, for instance, sound, temperature, image, etc., from the surrounding area. And the scene management module provides the customer the information about the quantity of people or vehicles. The information is fed back to the AI control unit 502, which arranges a proper program and broadcasting content for the individual or group displaying, thus the broadcasting system will perform efficiently.

In order to offer consumers to utilize communication apparatuses, such as computer, telephone, fax machine, etc. to transmit the information they want to broadcast, the present invention has improved the prevalent usage of the LED screen. The invention also has live broadcasting function, which rely on the AI workstation cluster to manage the broadcasting and share it to every display simultaneously, thus the system may reduce management cost. Meanwhile, the system receives the environmental variables to perform scene management in accordance with the individual or group broadcasting, and the benefit is high.

Accordingly, one embodiment of the present invention provides an AI displaying of network broadcasting system having scene management. This invention manages the broadcasting information shown on the screen of the display and

especially displays in an artificial intelligent manner. The invention is suitable for individual, groups or joint broadcasting for propagation, such as the commercial advertisement, individual's message or concert program, etc.

Although the present invention has been explained in relation to its preferred embodiment, it is to be understood that other modifications and variation can be made without departing the spirit and scope of the invention as hereafter claimed.

CLAIMS

What is claimed is:

1. An AI displaying of network broadcasting system having scene management, comprising:

a plurality of end-user devices, receiving broadcasting information (content) from user's input and transferring said broadcasting information through a plurality of communication links;

a plurality of displays, dynamically displaying broadcasting program according to some specific or environmental conditions, said displays sensing environmental changes to generate a plurality of environmental parameters; and

an artificial intelligent (AI) workstation cluster, connecting to said end-user devices via said communication links to receive said broadcasting information, said artificial intelligent (AI) workstation cluster comprising:

at least one user management interface, receiving and processing said broadcasting information to make a program schedule; and

an artificial intelligent control unit, connecting said displays and controlling the individual broadcasting or the group broadcasting among said displays.

2. The AI displaying of network broadcasting system according to claim 1, wherein said end-user devices are selected from the group consisting of computers, mobile phones, telephones and fax machines.

3. The AI displaying of network broadcasting system according to claim 1, wherein said communication links are selected from the group consisting of telecom network, fiber network, Internet, LAN network and wireless network.

4. The AI displaying of network broadcasting system according to claim 1, wherein said displays are selected from the group consisting of LED display, LCoS display, LCD display, PDP display, OLED display and CRT display.

5. The AI displaying of network broadcasting system according to claim 1, wherein said AI workstation cluster further comprises a website processing customers' information and said broadcasting information.

6. The AI displaying of network broadcasting system according to claim 1, wherein said environmental variables are selected from the group consisting of temperature, humidity, sound volume, stream of people and vehicle.

7. The AI displaying of network broadcasting system according to claim 1, wherein each of said displays further comprises a scene management module sensing and detecting environmental changes to generate said environmental parameters for said artificial intelligent workstation cluster, said scene management module comprising:

an image monitoring unit, receiving visual signal of surrounding environment;

an sound detecting unit, receiving audio signal of said surrounding environment;

an temperature measuring unit, receiving and measuring temperature changes of said surrounding environment;

an stream estimating unit, estimating the quantity of moving objects in displaying zone; and

an input device, receiving input information from the user nearby.

8. The AI displaying of network broadcasting system according to claim 7, wherein said image monitoring unit is a CCD (charge-coupled device) or a CMOS image sensor.

9. The AI displaying of network broadcasting system according to claim 7, wherein said sound detecting unit is a microphone.

10. The AI displaying of network broadcasting system according to claim 7, wherein said temperature measuring unit is a NTC (negative temperature coefficient) sensor.

11. The AI displaying of network broadcasting system according to claim 7, wherein said stream estimating unit is a IrDA (Infrared Data. Association) sensor.

12. The AI displaying of network broadcasting system according to claim 7, wherein said input device is a keyboard, touch PAD or touch screen.

13. The AI displaying of network broadcasting system according to claim 7, wherein said input information is at least one selected from the group consisting of vision and sound.