
Marilyn Monroe –The Digital Pop Art Creation and Practice

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Abstract

Using on the arduino microcomputer chip, the iconic image of Marilyn Monroe in the film, “The Seven Year Itch” is used with movements made by wind as interactive media. The artwork uses a large fan to bring Monroe to life. The creation takes one of Andy Warhol's classic Pop Art works – “Marilyn Monroe” as the original concept which is combined with interactive media to let audiences interact with the Pop Art style of Marilyn Monroe with the essence of Pop Art in spirit. Modern Pop Art demonstrates a series of visual images. In digital technology and the art aesthetics trend, this creation combined digital pop art with interactive devices allows users to participate and become the part of the art work, then create an experience for the visual pleasure of a continuous, dynamic image.

Keywords: Marilyn Monroe, Pop Art, Interactive

1 Background

In recent years, interactive device have been combined with technology, by which it has become the so-called new media art. In many places, such as museums, art galleries or exhibitions from different regions, new media art has become the performances milestone since it combined with interactive elements. Digital technology has driven a change on production methods for audio and video editing, clips and synthesis. Meanwhile, the realistic or mix method provides the creator a tremendous challenge to the traditional concept of the creative fields [1].

From computer art to media art, and then developing to the digital art or new media art, its application value had progressed into the field of science, and even life design application for pure art exhibition and appreciation. Interactive devices are a part of new media art, since it has the characteristics interaction, the participation of the audience becomes a part of the work beyond the function of just looking. The work value lies in the situational experiences through the interaction.

One notable example of these interactive experiences was used at the Digital & Interactive Gaming Conference, held in London in January 2008 [2], it took a game as the theme to explore interactive experience to go further in exploring how gaming and interaction be become very integrated in digital media. For instance, an application for teaching media design with game concepts can improve the entertainment of the application and make a change on human communication in the way modern society uses by digital media. The conference participants included digital art creators, experts, scholars, digital technology researchers and students. The Seminar sites also presented many of the latest technologies and its experiential creation works. By taking a game as an idea to catch human curiosity, and the attractive feature of art, it had indeed captured the eyes of audiences.

In creation of digital art, there are many cases of taking the concept of wind as interactive medium. When the fan starts, the wind will flow. Thus, the users in the performances space not only could have the visible phenomenon for wind, which was originally invisible to the eyes ,but also the physical senses in which could feel the flow of air. For instance, the work, “Blow Up”, by American artist, Scott Sona Snibbe, constructed a wall of 12 small fans, and then using it in the same way in the opposite position, formed a wall of 12 large fans, then, the users could control the large fans by blowing the small fans one by one, so, the fan walls were driven by the interface with each other, creating a form of an endless air flow effect [3].

In “Flow 5.0”, Daan Roosegaarde constructed two walls and walkway made of hundreds of small digital fans, and then letting the users walk in to this fan walkway to lead them to feel it is a virtual environment by its interactive technology. It is clear that the wind is an obvious media related to sense our existing space in our daily lives. The creation takes human breathing to explore human presence and perception. On his website, Scott Snibbe argues for this creation that: in the physical world, our bodies get perceived through some of phenomenon; we hear our voices through the vibration of air sound; we see our faces through bending light, breathing also as one attribute of the human fundamental nature. By breathing, we present that we are autonomous individuals [4].

Based on the above viewpoint, this creation work takes the movement of wind as interactive media to connect with Pop Art. An animated performance with the iconic image of Marilyn Monroe in the film, “The Seven Year Itch”, takes an arduino microcomputer chip as a basic controller to create the feeling of wind. The switch of the fan is given to the users for the interactive experience. The related artistic motivation, design process, and its experimental tests are presented in following sections.

2 Artistic Motivation

During the early 20th century, Marilyn Monroe is a famous movie star in the United States, whose attractive performance style led her to become a sexy symbol. Because of this, she later became one of the most memorable figures in popular culture [5]. After, Marilyn Monroe committed suicide, the American Pop artist, Andy Warhol, quite shocked by her death, was inspired to create the artwork “Marilyn Monroe”. This work became one of the famous masterpieces of Pop Art, seen in figure 1 [6]. In “The Seven Year Itch”, Marilyn wearing the flowing white dress thus became a memory impressed deep into our minds, it also became an inspiration for many artists as an object for imitating or acting (as figure 2).

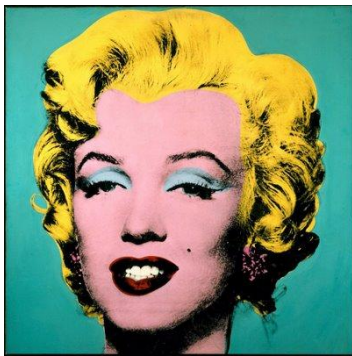


Fig. 1 The iconic of Andy Warhol's Pop Art
Resource: [6]



Fig.2 “The Seven Year Itch” Photo of Marilyn Monroe
Resource: IMDb [7]

How to provide interesting interaction to the users is an emphasis on how the concept of interactive technology and art is integrated in performance. Interaction is a process of communication between the work and the viewers, which the interactive should be focused on the viewer's cognitive and mental level, the art will be based on one-on-one to interactions to its message, by which progress of the interaction changes with the user. Its interactive behavior will change the result of each performance. The value of digital art

is the interactive interesting; Megatrends's author, John Naisbitt, said that "First of all you have to do something interesting, if you want to sell products, inspire employees, and attract customers". In the post-modern society, entertainment is seen as an essential element in our life.

Based on the above statement, this creation takes one of Andy Warhol's classic works, Marilyn Monroe, as the model to connect interactive art to let the audience interact with Marilyn Monroe in the spirit of Pop Art. In contemporary art, its pop performs a series of visual image. In digital technology and the art aesthetics trend, this creation aims to combine multimedia and digital pop art with interactive devices so as to allow the users to participate in part of the digital media, allowing them to experience the visual pleasure of a continuous, dynamic image. By using the flow of wind as part of medium, this creation attempts to create an animated performance of Marilyn Monroe through the interaction with users.

3 The design process and practice

3.1 The original concepts

Interaction Design (its abbreviations as “IxD” or “IaD”) is a new subject field which integrates human science, technology, culture, and aesthetics. According to the definition from Wikipedia [8], interactive design is a field of artificial systems and behavior. Interactive design can create the experience of communication and its interaction with the users. And is thus, interactive design is an essential element for the processes of production, for example, software, mobile devices, artificial environment, services, portable devices, and the structure of system organization.

Through the system of interactive design, we could create a positive reaction, as well as the experience of ease, comfort and its emotional feedback. Among them, how to create an emotional reaction to the users is to allow them to have its positive memory as the mainstream design of concept [9]. In the creation of interactive devices, the designers usually take the direct, natural, and instant design considerations. However, most natural interactive methods should be based on the intuition to operate, by using the input image and its interactive interface to communicate with computer. This leads the computer to perform its action so as to get the visual and audio feedback to achieve the effect of interaction [10].

The creation uses arduino microcomputer clip as the main controller, by mean of the switch of the fan, its positive and negative magnetic conversion gives a signal to the computer to control the speed of the wind to play different sections of Marilyn Monroe's flowing white dress. Its visual art elements represent Pop Art. The image of Marilyn Monroe is collected from Andy Warhol's “Marilyn Monroe” and not from human acting. When the users switch on the control of movements of the fan, by the Pop Art, and the visual image of Marilyn Monroe's flowing white dress can be seen, the interactive viewing experience is created as well. This artwork's hardware device included a the fan integrated with arduino clip, multimedia PC, LCD screen, and a projector. The creation's design and its devices are shown in figure 3, the output

projection of visual animation in figure 4.

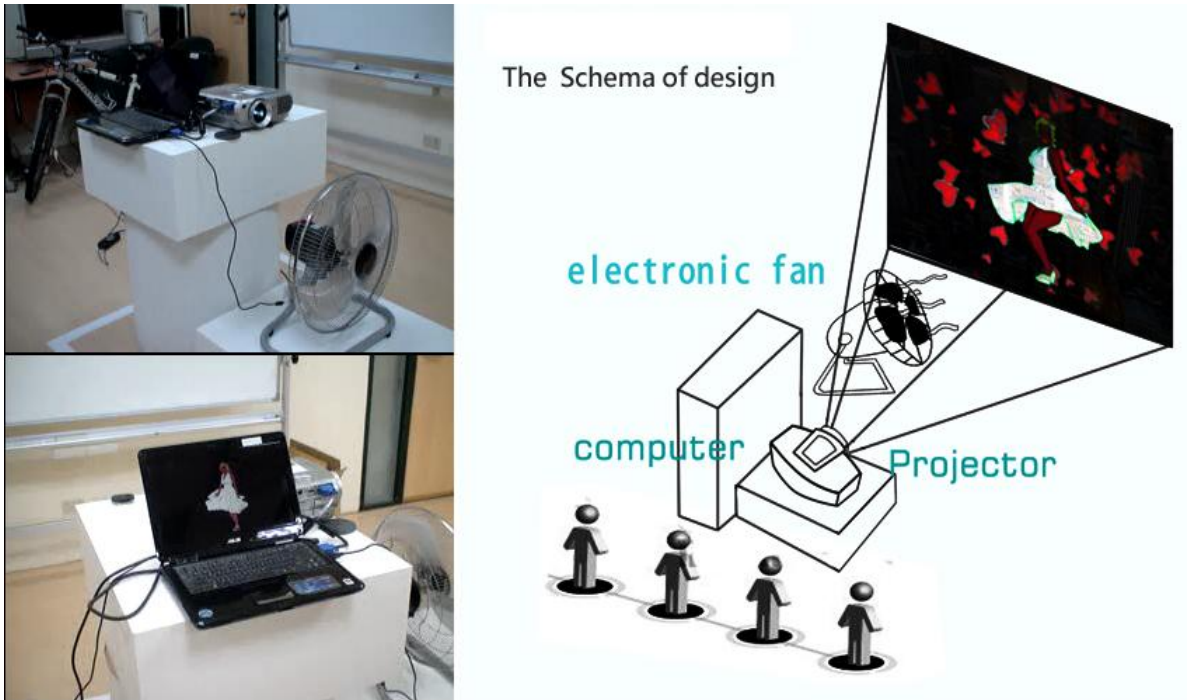


Fig3. The schema design of Marilyn Monroe (Digital Pop Art)



Fig 4. The screen output of Marilyn Monroe (Digital Pop Art)

3.2 The system architecture

The composition of this creation includes input an electronic fan as well as an arduino microcomputer chip. It uses this computer chip to make sure whether if the fan is activated. Through the speed of fan blades, the different signals are created. The fan's power is divided into 7 levels; 0 to 6. These different levels are then sent to a computer. The artwork is created with Adobe Flash, and the messages received from the

fan will affect the overall animated presentation. The stronger fan signal, the larger the movement and angle of Marilyn Monroe's white dress will be flowing in. The output for this animation is projected onto a wall screen. The end-result is an interactive piece of Marilyn Monroe, where the audience can control the movement of the fan creating different animations, as in figure 5.

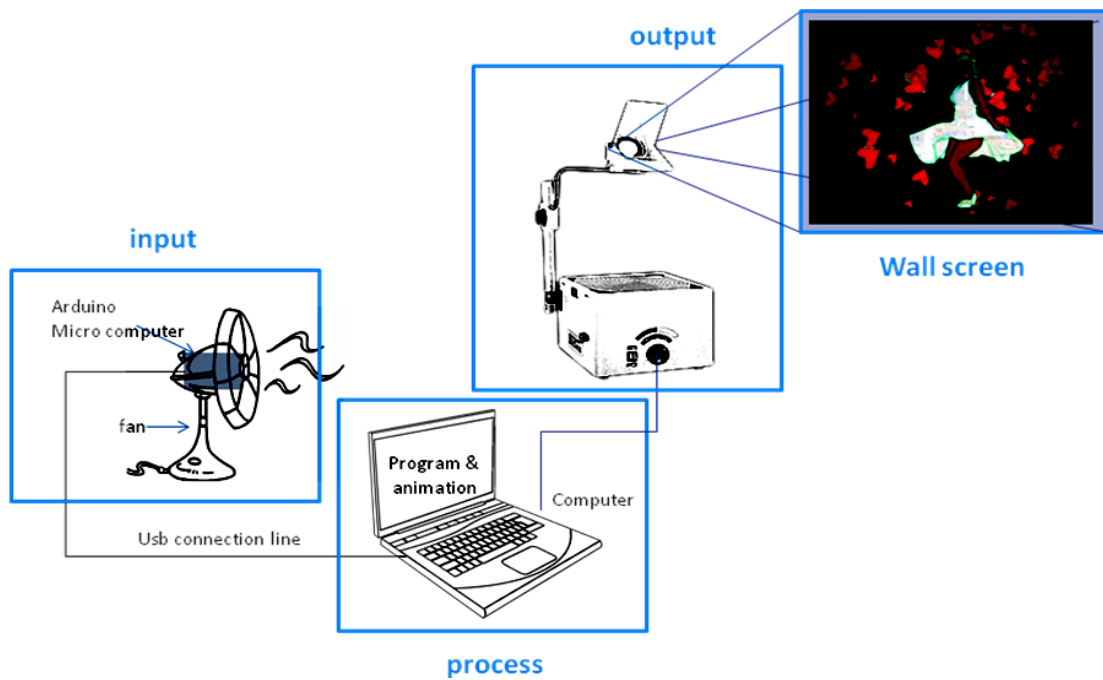


Fig. 5 The system architecture of Marilyn Monroe (Digital Pop Art)

“Pop Art” is derived from an English Independent Group, and originally defined as a discarded, temporal, free consuming culture. That made it a reaction for political satire, including comic style, cartoon characters, popular idols, and mixing colored small objects in daily life, this presented the popular culture during the 1950's. In the 1960s, Andy Warhol, held an exhibition which he presented by Campbell Soup cans, Coke bottles, money, and celebrities' portraits as artwork. Its Pop creative elements charmed its way into mainstream media, causing a sensation.

How do we identify the feature of Pop Art? On July 1st, 1957, Hamilton wrote the definition of pop art: “Pop art is popular, can be expanded (easy to forgot), mass-produced (as cheap), young, smart, spelling, and commercialization”. From the above definition, we may easily think of it as what was popular with young adults at the time; such as idols, love, or sex, brilliant colors (such as magenta, bright yellow, bright orange, apple, and green), as well as generous geometric patterns or lines (for example, heart-shaped, round, square, colored lines, and spots) into patterns[11].

In order to further add to the style of Pop Art, the work uses magenta heart shapes and other colorful animations onto background of Monroe for the performance. Thus, this

Marilyn Monroe creation has a Pop Art as well as pleasing, visual effect. (as figure 6, 7)



Fig. 6 The Pop Art style of the pattern in the work

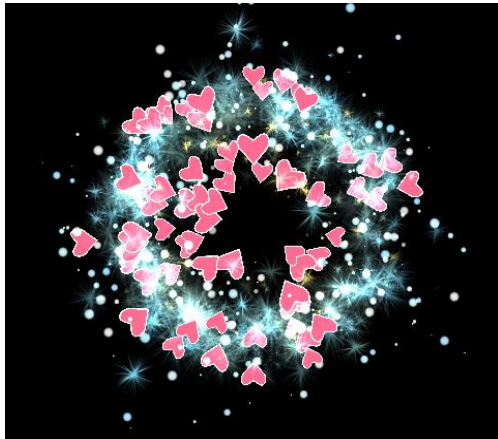


Fig. 6 The Pop Art style of the pattern in the work

3.3 The programs coding

Just like the about Rosegaarde's approach is that his famous work - FLOW 5.0 [4] are not simply built and let everyone feel inside his work with wind. So, this work must install adapting the software and wind materials to create new contexts, and strategies of interaction for the audience.

When the audience switch on the fan in the space of exhibition, the arduino clip can detect the rotation speed of the fan and transfer a message code to computer, which the clip is installed in the fan. In the meanwhile, the flash program had received the message, and then derived the Monroe's show according the value of message code, which was divided into four levels. More strength the wind, the action level would be dramatic more, and greater of Monroe's skirt fluttering magnitude. In order to create the visual effect, the pop art patterns also match Monroe's show, more the strength of wind; the effects will be more gorgeous. The audience on the switch of fan, the show action will play it once. After the Monroe's show was end, the work will return to the ready situation to wait for the next audience interaction. The flowchart for the audience interacting with *Monroe* is listed below (Fig. 7):

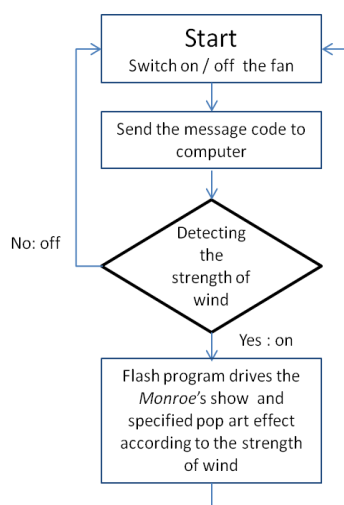


Fig. 7 A flowchart for detecting the fan wind of the work

In the program about how to drive the Monroe's show and specified pop art effect according the strength of wind, which is coding as below tow parts. The first part of program is the function which is received the message from fan and detecting the strength of wind from Arduino clip.

```

var randomValue = 0;
  Mouse.hide();
  aListener = new Object();
  aListener.onConnect = function()
  {trace("** Arduino connected! **");};

  aListener.onConnectError = function()
  {trace("** Arduino connection Failed!
  check the port number and serialProxy **");};
  //this gets triggered when Flash disconnects from Arduino
  aListener.onDisconnect = function()
  {
    trace("** Arduino disconnected! **");
  };
  //this gets triggered when Flash receives data from Arduino
  aListener.onReceiveData = function(evtObj:Object)
  {
    //trace(evtObj.data);
    var inData = evtObj.data;

    if (inData == 0){
      randomValue = 0;
      //trace("none");
      trace(randomValue);}

    if (inData == 1){
      randomValue = 11;
      //trace("weak");
      trace(randomValue);}

    if (inData == 2){
      randomValue = 12;
      //trace("middle");
      trace(randomValue);
    }

    if (inData == 3){
      randomValue = 13;
      //trace("strength");
      trace(randomValue);}
  };

  var a:Arduino = new Arduino(5332);
  a.addEventListener("onConnect",aListener);
  a.addEventListener("onConnectError",aListener);
  a.addEventListener("onDisconnect",aListener);
  a.addEventListener("onReceiveData",aListener);
  
```

The second part of program is to drive *Monroe's* show according the strength of the wind, which is transformed to the code of 'randomValue' in the first part of program.

```

showAnimation();

function showAnimation() {
  if (randomValue == 0) {
  
```

```

        tellTarget ("mary")
        {gotoAndStop(1);}
    }

    if (mary._currentFrame == 1 ||
mary._currentFrame == 76 || mary._currentFrame == 165 ||
mary._currentFrame == 245 || mary._currentFrame == 1)
    {

        if (randomValue == 0){
            tellTarget ("mary")
            {gotoAndStop(1);}

        }

        if (randomValue == 11){
            tellTarget ("mary")
            {gotoAndPlay("level1");}

        }

        if (randomValue == 12){
            tellTarget ("mary")
            {gotoAndPlay("level2");}

        }

        if (randomValue == 13){
            tellTarget ("mary")
            {gotoAndPlay("level3");}

        }

    }
}

```

4 Conclusions

The significance of new media to the users, is not only a efficient and high productivity for work, but emphasizes on entertainment, enjoyment, and interest. It can inspire an experience of perception in the aspect of aesthetic and creativity, in which it is the key point of the modern interactive design. This creation takes interactive art as a thought and takes a technical aspect as a new way for thinking. Using the means of the interaction between the users and the artwork, the diversity of art thus presented. Pop Art can create a series of visual images; this creation thus can bring a fun form of continuous dynamic visual movement. That is, through the combination of digital technology and art to embody a form of visual art and digital design. The creation attempts to combine the interactive art with technology, and then with the users' interaction in order to represent the spirit of Pop Art, the art style is easy to understand since it is common amongst our daily lives.

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