

## **Study of technical standards for Projection Mapping in advertising events**

**Prof. Magdy Abd elaziz Emam**

Professor of Design, Advertising Department Faculty of applied Arts, Helwan University

[prof.dr.el-beialy@live.com](mailto:prof.dr.el-beialy@live.com)

**Prof. Samar Hany Alsaeed**

Professor of Design, Advertising Department Faculty of applied Arts, Helwan University

[dr.samarhany2020@gmail.com](mailto:dr.samarhany2020@gmail.com)

**Researcher. Mohammed Alamir Alsayed**

Exhibition Coordinator Researcher, General Organization of Cultural Palaces

[mohammedalamir87@gmail.com](mailto:mohammedalamir87@gmail.com)

### **Abstract:**

Projection Mapping are considered a technological innovation that allows designers to be able to make drawings or videos to unite with any surface like buildings or roads, projection shows have many phases, these phases start with pre-production process where fitting of photos and videos take place within a three dimensional prototype for the surface of projection to give it its final appearance, then the second phase includes getting to know the projectors being used for the show in addition to getting to know the programs that will be used to add vitality to an advertising. Because using such thing can result in making an advertising more vivid in audience's minds than other methods -may be because of amazing drawings, or because of unique three or four dimensional experiences or interactive combinations that they enjoyed- and that is the effect caused by Projection Mapping for the audience, this lead to advertisers putting it among the newest ways of advertising as it accomplishes the connective targets, and because of scarcity of research papers talking about artistic basis for Projection Mapping in advertising in Egypt and applying it to different surfaces. In this research I tried to be able to specify the artistic basis for light projection in advertising events through descriptive method for light projection shows, in addition to displaying some models where Projection Mapping are being used. In order to accomplish the target of the research definition of Projection Mapping is being made in addition to displaying some light projection show examples and in order to achieve the target of this research some points are displayed such as Projection Mapping definition, its types, and its contents in addition to displaying the basis of making a light projection show like those made by companies specified in Projection Mapping used in advertising events, then we will display some suggestions for ideas that can be used in advertising events, then we will analyze some examples of light projection used in advertising events and we will conclude that Projection Mapping are a method that can facilitate the work of advertising agencies and designers as they can apply it to be able to get unique advertising ideas in order to create interaction between the audience and the event.

### **Key words**

Technical standards, Projection Mapping, advertising events, Surface

## **Introduction**

The great development in techniques and means of communication has led to an increase in the ability to quickly deliver information, and this has given it a comparatively great advantage compared to the old means of communication. Spreading and transmitting information quickly and efficiently, in an attempt by companies to use the means of communication to win over those inside and influence their minds, which is represented by the ability of major brands to which recipients are exposed every minute of their day through multimedia, which aims to create emotional and long-term impressions about those brands.

With this rapid development in the fields of advertising design, a new type of advertisements has recently appeared associated with a new display technology on buildings and internal and external surfaces using light displays in all its styles, shapes and colors, and this technology is called (Projection Mapping), where it can be applied and used in the advertising industry, because of its ability to give a special character to buildings and roofs, as it combines between the building or the surface displayed on it and the advertisement itself and its relationship to space, so they cannot be separated from each other and must be fully realized.

### **Research problem:**

What are technical standards for Projection Mapping in advertising events?

### **Reasons behind choosing the research:**

Scarcity of researches handling technical standards for Projection Mapping in advertising events in Egypt.

### **Search objective:**

Finding the technical standards for Projection Mapping in advertising events.

### **Research importance:**

Shedding light on the technical standards for Projection Mapping in advertising events.

### **Research hypotheses:**

The research assumes that it studies the types and components of Projection Mapping, through it; it is possible to reach the most important standards for Projection Mapping in advertising events.

## **Research Methodology**

The research follows the descriptive approach Projection Mapping and analyzes some models that were implemented using Projection Mapping.

### **The importance of employing projection mapping in advertising events:**

Imagine the sails of the Sydney Opera House coming to life before your eyes. Imagine walking through the doors of a business function only to suddenly find yourself in a life-like forest. Such experiences would no doubt turn any mundane function into a creative escape, of course, the

sails didn't come to life, and you didn't walk through an inter-dimensional door. 3D projection mapping allows event planners bring ordinary objects in a range of shapes and sizes to life using engaging 3D displays.

Projection mapping uses technology to project imagery onto 3D objects instead of traditional flat surfaces. Projections can be as basic as stage lighting or as complex as fully-mapped videos on industrial landscapes and buildings.

### **Technical standards for Projection Mapping as provided by companies specialized in advertising events**

- Choosing the right environment and measurements:

To achieve an outstanding projection mapping, you need to make sure the environment is appropriate, whether you are creating a new roof or using the things available in the existing environment, the first thing you should consider is the size of the roof you use, as it will be a major determinant of cost, then you need to know how transparent and clear the surfaces you will fall on because some surfaces are not suitable for projection - especially reflective surfaces - and transparent surfaces are great for projecting because the light from the projector glows through them, creating an ethereal feel, but opaque surfaces may be better for clearer images, and you also need to take all the necessary measurements, you need to measure all the dimensions of the surface you'll fall on, as well as the distance between the projector and the surface you'll be viewing on, which will determine the type of lens you'll need in addition to the brightness level of the display, and then determine the location of the projector (it must be placed in a place where people will not interrupt or obstruct the projection process, and it is not recommended to place the projector on the ground).

- Create Content:

From the beginning, the goal to be achieved from the presentation should be clear, so that you can know whether animation, video, or live 3D broadcasting.... is best suited to reach the goal, and whatever content you choose, you must pay attention to accuracy and image size because it may vary depending on the device you're using.

- Choosing the appropriate devices for the show:

The success of projection mapping depends on the projectors, the projected surface and its size determine the type of equipment you will use; The equipment needed to drop onto a small object is different from that needed to drop onto a large object such as a building. The larger the area needs larger and brighter the projectors, if the object is very large, you may need multiple monitors. You'll also need to consider lights, lenses, and projector mounts. If you pair the display with sound, you need sound systems appropriate for the environment or space you will be using.

- Design suitability for the selected surface:

At that point the first thing is to make sure that the design you will be displaying is set using specialized software, it is necessary to get the exact size and shape of the design, otherwise the projection will look awkward and useless, and if you are using more than one projector, you have to make sure that the process of blending and disappearing the design looks like it is from a single source, and surfaces that have depth or curves are more difficult to design and project views than those with straight edges, but the designer must be able to make their design wrap

when projecting on those edges and curves program specialized, then you may need to make some adjustments so that the alignment is perfect when you are done with this step all that is left is to make sure everything is in place and working well and to work around this it is possible to make a microcosm of the working environment to try the drop process before actual implementation until any errors that may occur are eliminated.

### **Advantages and disadvantages of Projection Mapping in advertising events**

Advantages of Projection Mapping in advertising events:

When you compare projection mapping with traditional displays, advertising designers certainly prefer projection mapping, the advertising industry in particular has gained many advantages through the wonderful environments that can be created using this unique technology:

#### - No Flat Surface Requirements

As an event planner, you don't need to be confused anymore! With most display event-tech like LED screens requiring a flat surface, projection mapping lets you project onto any type of surface without distortion.

You can focus on the content of your projection instead of preoccupying yourself with incompatible surface types.

#### - 3D Imaging Without 3D Glasses

Projection mapping goes way beyond projecting images onto an object. The projectors can create 3D videos and images, and this allows you to turn any surface into a completely new one rather than simply distorting it, this means attendees can step into a 3D world you create without having to put on 3D glasses.

#### - Easy to Move Around

LED panels are large and uncomfortable to carry around. This can become especially burdensome if you need to put on an event in multiple locations in a short time frame, that's not even the half of it. If, for example, you discover that the traditional display system you just placed at the event facility would be better fixed at another location in the same room, you'd have to call the contractors back to uninstall it and fix it on the other wall or area. That's an additional cost! With projection mapping, all you have to do is map out the various objects you want to project onto in advance using the projection mapping software. When you're ready to move to the next location, just pick up the projector(s) and go.

#### - Repeated Use

If you've been to a one-off event that required a lot of printed props, displays or advertisements, everyone's left wondering what to do after the event is over. What happens to the materials used, the event planners or hosts could store all the props in the hope of selling them someday for a fraction of their original cost. They could also just throw them away, but with projection mapping, you can program new content over and over again, and apply it to a range of surfaces in any venue. There'd be no need to purchase a new projector after each event, and your costs would be limited to the expense of the programmer.

Disadvantages of Projection Mapping in advertising events:

#### - Expensive budget:

Projection mapping are not cheap. The design and production operations can range from an average of \$150,000 to more than \$1 million, which must be taken into consideration before starting to prepare for the design and production of advertising with this technology.

- Long time to preparation:

Projection mapping need from two to four months after agreeing to implement the advertisement with this technology to design and implement the show in the best way, which some consider a long time of preparation for events

- Problems of gatherings and crowds

Since the projection mapping are primarily aimed at displaying spaces for crowds of recipients, which puts event designers in constant need of a trick without the occurrence of many problems that result from gatherings and crowds.

**Research results:**

The researcher reached the following results:

- To create a projection mapping that has a strong impact in advertising events that makes it stick in the minds of the recipients, the design to be displayed must be proportional to the size and shape to be projected on, and very accurately, otherwise the projection process will seem repulsive and counterproductive.
- The most prominent features of the techniques of projection mapping are the strength of the impact that these offers have on the recipients, as it makes them stick in their minds for a longer period of time than other advertising means, which made advertisers place it among one of the most important modern advertising means that contribute to achieving their communication goals.
- Projection mapping as a way to easier for designers and advertising organizations to implement innovative advertising ideas, which contributes to creating an atmosphere of coexistence between the audience and the event
- Many institutions consider projection displays as one of the most important advertising means, especially in conferences, combined events and launching new products, despite the defects of these techniques, the most prominent of which are the high cost and long preparation period, but by applying the technical foundations it is possible to reach effective results for the audience addressed

**Research Recommendations:**

- The researcher recommends institutions and advertising workers to use projection displays in conferences and large group events, in which the attendance is large, so that this technology is compatible with the volume of expenditures and to achieve effective results.
- The researcher recommends, when choosing the place and time for executing the show, to inspect the place and the surface more than once and at different times to make sure that there are no problems that affect the power of the offer.