SEMINAR REPORT

ON

FOG SCREEN

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Introduction

The Fog Screen is a new invention which makes objects seem to appear and move in thin air. The Fog Screen is a suspensible device that creates a thin, smooth fog surface almost instantly when it is switched on. It can be used for image projection just like a conventional screen.

Fog Screen is, however, a screen you can walk through. The fog, made of ordinary water with no chemicals whatsoever, dissolves in seconds by itself, leaving no trace behind when you switch it off. The viewer can walk through the screen – walk directly into the picture. People and things can be brought into view through the screen. There are numerous other ways to use the Fog Screen.

Fog Screen is an exciting new projection technology that allows to project images and video onto a screen of dry fog, creating the illusion that the images are floating in midair.

Fog Screen is the world's first immaterial walk-through projection screen. Its Qualities, in particular the walk-through capability, set Fog Screen apart from other displays and thus created a seemingly successful market for its products.

The Fog Screen is an innovative display technology that allows for projections on a thin layer of dry fog. Imagine the traditional pull down screen that is found in many classrooms today. Instead of a screen being pulled down from the ceiling, fog is pushed down and held in place by several small fans, allowing for a consistent surface for display.

Formation of fog screen

- It is formed by using ordinary tap water and digital technology like ultrasonic device to create a thin layer of dry fog which is sandwiched between two air-curtains.
- The fog is created by suspended fog generating device.
- The fog is made up of ordinary tap water with no chemicals

Fog Screen creates a dry´ fog by ensuring that the water droplets are in the range of 2-3 microns in size and are electro statically charged so that they move around and away from other objects. The fog is made within the device using water and ultrasonic waves. If you hold your hands in the fog flow, the fog feels dry and cool, and your hands do not get wet.

After the screen is formed, images can be projected onto it. The screen can be translucent or fully opaque. The fog we are using is dry, so it doesn't make you wet even if you stay under the Fog Screen device for a long time. The fog is made of ordinary water with no chemicals whatsoever. With two projectors, you can project different images on both sides of the screen. The founders of the Fog Screen were intrigued with the prospect of creating an image that could float in the air and that people could walk through .They set out to make a projected image float in the air by using different media such as dust, water, fog. And then a mist of tiny water droplets. They then had to iterate their design repeatedly to ensure that people would not get wet and that the Fog Screen could operate within a broad range of environmental conditions. The ultrasonic transducer is used to divide the water into small and tiny water droplets as the fog which we are using here is completely dry and it is light. If we will take lager water droplets then it will create wet fog which can't be used in the formation of screen. The fog we are using is dry, so it doesn't make you wet even if you stay under the Fog Screen device for a long time. With two projectors, you can project different images on both sides of the screen.

Advantages

- The Fog Screen developers say the unique nature of Fog Screen will make it a memorable experience for customers Fog Screen is environmentally friendly, as it uses only water as requirement and produces chemical free fog.
- Increase product skill and quality of products
- Safety for kids, fun and play time for the kids. It is Immaterial you could walk through it.
- Increase production skills-technology transfer.

Limitations

- Fog Screen works best indoors with a dark background that enhances the brightness of the image on the Fog Screen behind the projector. So, it can't be used in daylight.
- It is presently very much expensive, but theFogScreen.inc is working on providing it in a reasonable price.
- Price is one weakness, with the cost Fog Screen will have to cater for a specialized market, unlikely ever to be used in the normal household or to replace plasma/LCD displays.
- Need 1kW of energy to produce 1m long fog screen. And it is produce 3-5 litres of water in one hour which should be vent. And you can't make a high fog screen, because fog would diffuse with distance.

Applications

- Fog Screen has been used in live malls, product launches, museums, to attract more and more peoples.
- It is used in case of projection a 3D image esp. in studies.
- It can be used in seminars to make it more interactive.
- It can be used in place of air curtain in clubs to make it attractive. Museums, events, trade shows, night clubs, casinos, TV shows, and amusement parks are a number of areas where Fog Screen has been put into effective use.

Conclusion

The implemented system enables one to view 3D objects in mid-air and observe them from almost any angle. Using it as an immaterial, head-tracked dual-sided display, has led to an enhanced visualization experience. It creates a strong visual effect of 3D objects floating in air, even when the image is not stereoscopic.