**Fog Screen**

Abstract

Fog Screen is breakthrough technology that allows projection of high quality images in the air. It is currently the only walk-through projection screen. You can literally use the air as your user interface by touching only the air with your bare hands. The screen is created by using a suspended fog generating device with no frame around, and works with video projectors.

**Introduction**

Inspired by science fiction movies such as Star Wars, two Finnish virtual reality researchers created the Fog Screen to recreate some of the effects from these movies in real life.

* 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 mid-air.
* 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.

**History**

It was invented by two Finnish virtual reality researchers Fog Screen, which was initially known as WAVE (Walkthrough Virtual Environment), was announced in December 2001.The first public demonstration of Fog Screen was in Finland in October 2002.Till then it is in use in different areas and improvements are being done to increase its effectiveness. Inspired by science fiction movies such as Star Wars, two Finnish virtual reality researchers created the Fog Screen to recreate some of the effects from these movies in real life. Fog screen is one such immaterial screen and uses the method of fog on which to project imagery (DiVerdi et al. 2006).

**Technology**

All the important principles of Fog Screen technology have patent pending. The basic components of the screen are a laminar, non-turbulent airflow, and a thin fog screen (or any particles) injected into and inside a laminar flow. Created this way, the fog screen is an internal part of the laminar airflow, and remains thin, crisp, and protected from turbulence.

When the screen is formed, images can be projected onto it. The screen can be translucent or fully opaque. The quality, size, and other features of the screen have been thoroughly improved in our latest prototype which was shown at Siggraph 2003.

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. When the device is in operation, it generates a mild downward air and fog flow.

**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.

**Applications**

* Unforgettable entrance
* Stunning immaterial space divider
* Create CGI and HOLOGRAPHIC special FX PROJECTIONS
* Ultimate special FX
* Highlight key concepts

**Advantages**

* A consumer could be enticed to walk through a fog screen into a special sales area, for example: the fog screen developers say the unique nature of the fog screen will make it a memorable experience of the customers.
* Fog screen is environmentally friendly, as it uses only water as requirement and produces chemical free fog.

**Conclusion**

Fog Screen has been successfully used in this international event:

1. Entertainment (live shows, live concerts, night clubs, stage productions, private parties i.e. Disney Enchanted Tour, Eurovision, Harrah’s, Cirque de Soleil, MGM Grand, 20th Century Fox)

2. Brand promotions (P&G, Diesel, Victoria’s Secret. Bud light/Maxim Tour, Xbox)

3. Trade shows and exhibition events (Nokia, Motorola, Sony, and Siemens)

4. Theme parks (Key US theme parks)

5. Museums and Science Centres (Palais de la Découverte, Taiwan National Museum).

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