



W E L C O M E

HELIODISPLAY

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CONTENTS

- INTRODUCTION
- REAR PROJECTION
- WORKING
- HELIOCAST INTERACTIVITY
- MODELS
- FEATURES
- SPECIFICATIONS
- PRICING
- FOG SCREEN
- PERSPECTA
- ADVANTAGES
- DISADVANTAGES
- FUTURE ENHANCEMENTS
- APPLICATIONS
- CONCLUSION
- REFERENCES

INTRODUCTION

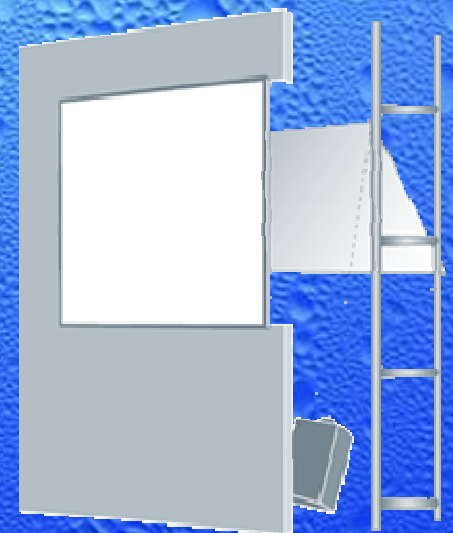
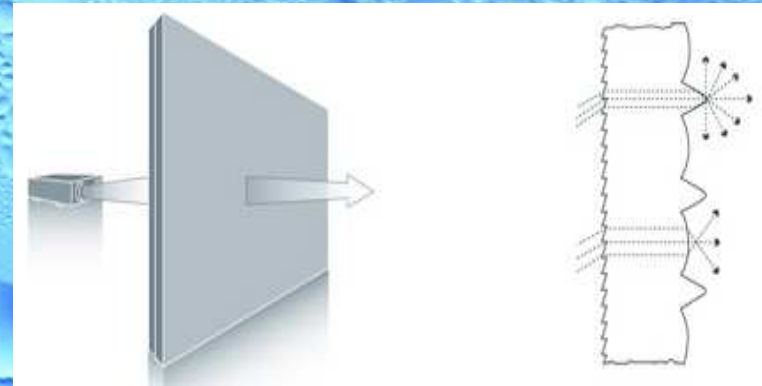
- INTERACTIVE PLANAR DISPLAY
- DEVELOPED BY CHAD DYNER
- PRODUCED & MARKETED BY IO2 TECHNOLOGIES

REAR PROJECTION

- In-camera special effects technique in film production
- Widely used for many years in driving scenes

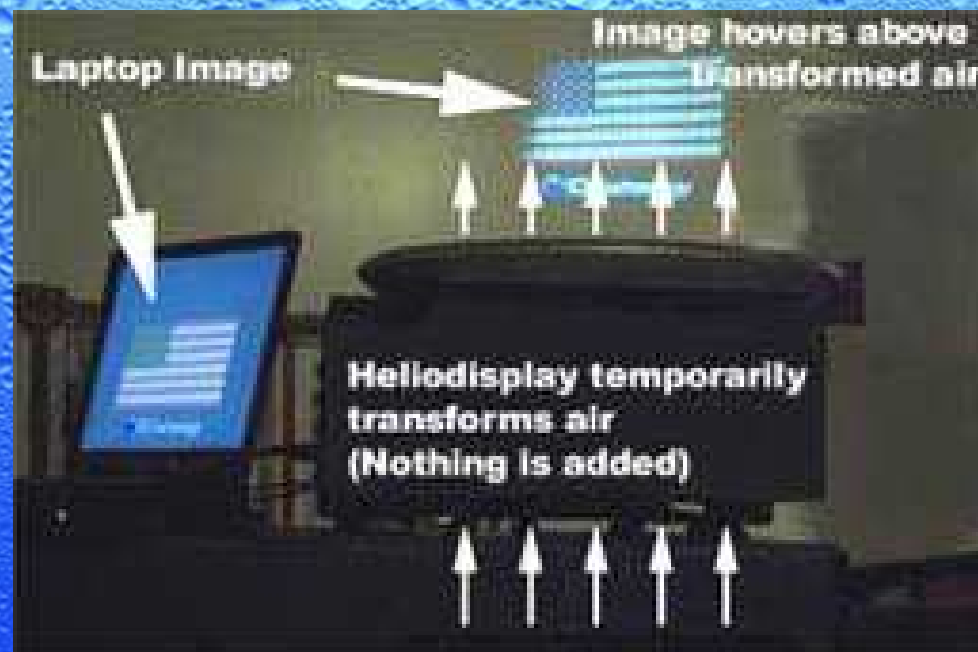
TECHNIQUE

- Actors stand in front of a screen
- A projector positioned behind the screen casts a reversed image of the background
- A major advance over rear projection is FRONT PROJECTION
- Examples
 - James Cameron - Aliens
 - Austin Powers film series



WORKING

- Projects images onto a screen of microscopic particles.
- Microdroplets 1-10 microns in diameter.
- Optical tracking system for monitoring hand movements.



WORKING

contnd

- System creates a dynamic, non-solid particle cloud by ejecting atomized condensate
- A heliodisplay runs on particles present in the air
- Particles in the air are converted into nearly atom-sized particles, and are re-emitted upward
- Held together by surface tension and form a cloud
- Changing the molecular properties-qualities of the image, like brightness and sharpness, can also be changed

HELIOCAST INTERACTIVITY



When the Heliocast display is connected to a PC using a standard USB cable, and with the supplied IO2 Heliocast software installed, you can use your finger for touchscreen control to navigate and interact with content such as drag & drop, clicking, double clicking etc as one would on a standard PC.

MODELS

M1

The original **M1** units produced by IO2 were advanced prototypes and proof-of-concept, but a few were sold to early adopters through channels such as eBay.

M2

The second-generation **M2** Heliodisplay supports a 30" image with 16.7 million colours and a 2000:1 contrast ratio. The interactive **M2i** version includes virtual touchscreen capability.

heliodisplay (inc) mid-air video projector



The M2 Heliodisplay multimedia projector supports up to a 30" viewable diagonal free-space image. The M2 contains an integrated projection system.



The M2i Heliodisplay is the most advanced free-space display. The M2i supports up to a 30" diagonal (4:3 aspect) image. The M2i utilizes cursor control interactive capabilities enabling virtual control of the mouse to interact with floating images.

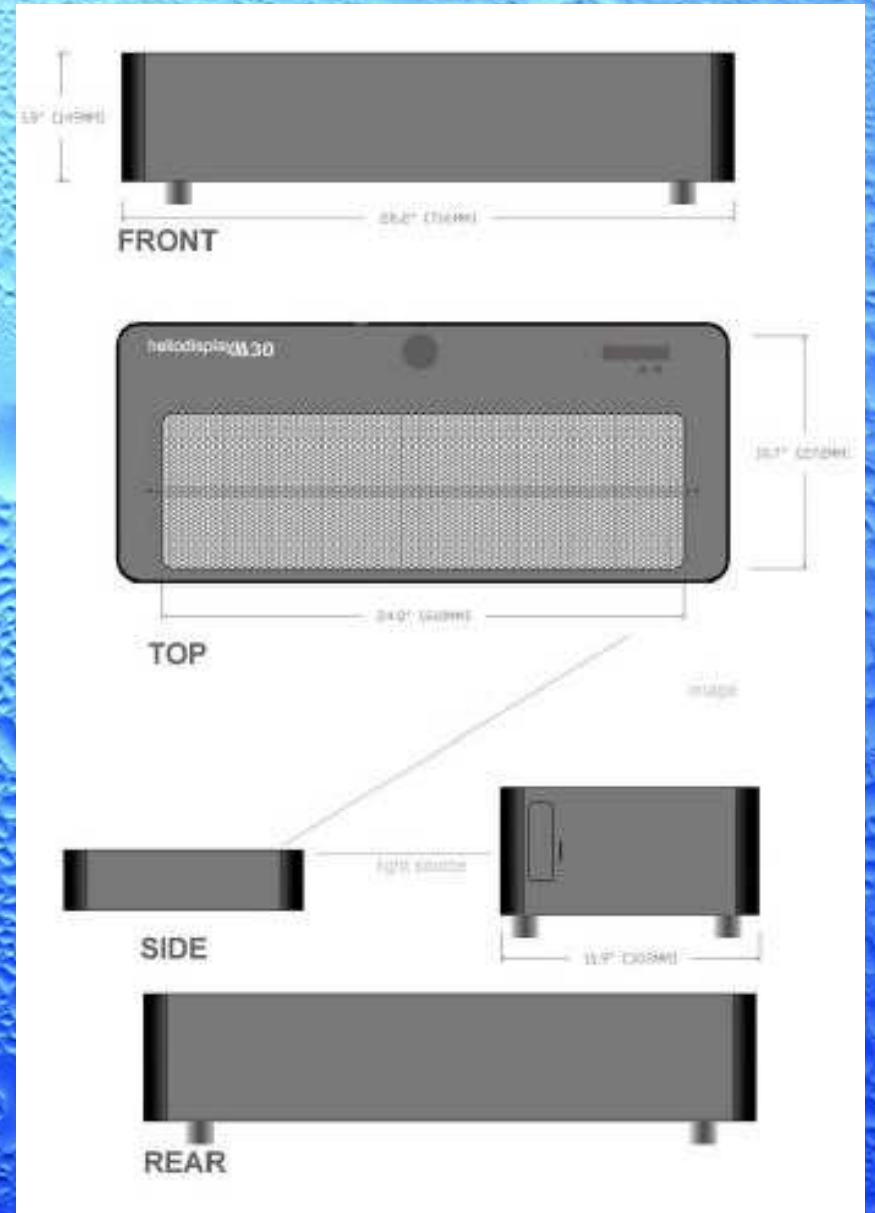


MODELS

contnd

M3 and M30

- ❖ Third-generation M3 version launched on February 28, 2007
- ❖ Has the same basic specifications as the M2, but is said to be much quieter, with improved brightness and clarity
- ❖ More stable operation with an improved tri-flow system.
- ❖ Standard ratio of 4:3 in addition it also displays 16:9 widescreen ratios.
- ❖ There is also an interactive version called the M3i.
- ❖ The M30 is the updated version of the M3, 30 designating the diagonal screen size.



MODELS

contnd

M50 and M100



- ❖ In late 2007, IO2 Technology introduced two larger Heliodisplays, the M50 and M100.
- ❖ The M50 has a 50" diagonal image
- ❖ The M100 has a 100" diagonal image (about 2 meters tall).

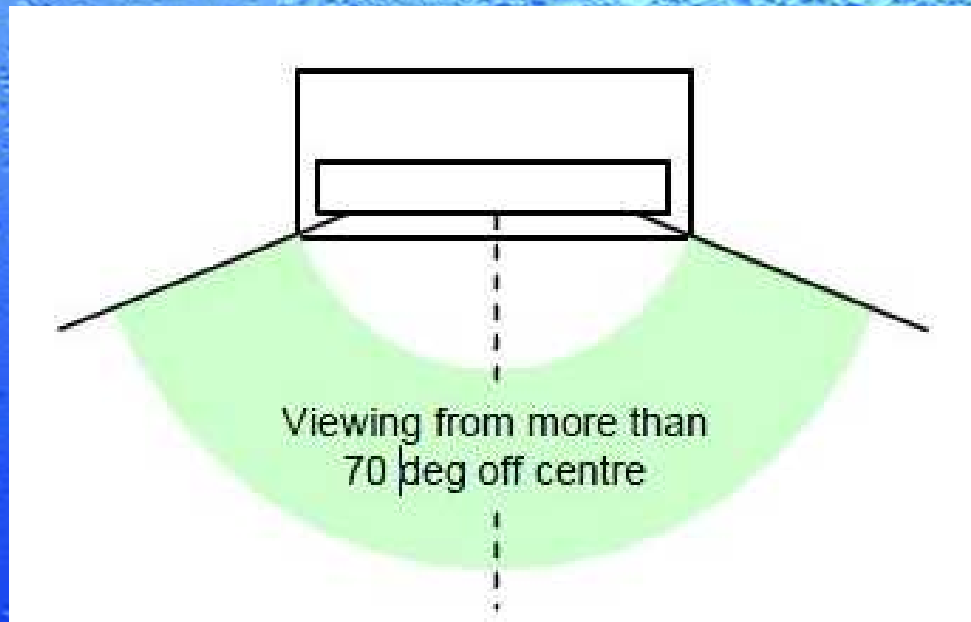
FEATURES

- ❖ Improved tri-flow system -for increased image stability and uniformity
- ❖ Enhanced brightness and clarity
- ❖ 1,024 x 768 resolution, 16:9 or 4:3 aspect ratios
- ❖ 2000:1 contrast ratio, VGA / S-Video / composite inputs, USB, NTSC / PAL compatibility
- ❖ Significantly quieter operation
- ❖ Marketed to the uber-wealthy and board room runners
- ❖ Basic M3 is available for a stiff \$18,400,M3i -\$19,400
- ❖ Designed to be hidden
- ❖ The display connects to a standard video source
- ❖ Projects any images that would be viewable on a computer screen or television
- ❖ No specialized hardware or software

FEATURES

contnd

- ❖ Interactive version of the Heliodyplay (M2i) allows a finger to act as a computer pointing device
- ❖ User can interact with floating images or video
- ❖ M2i comes with Heliocast software



- ❖ Like any rear projection system, the images are best seen within 70 degrees to either side.

SPECIFICATIONS

- ❖ Image Size: 30" measured diagonally (4:3 aspect)
- ❖ Interactivity: Virtual Cursor Control – Heliocast ver. 2.0
- ❖ Aspect Ratio: 4:3 or 16:9
- ❖ Resolution: Native – SVGA 800×600 pixels; Resize Support: 640×350 to 1280×1024 pixels
- ❖ Contrast Ratio: 2000:1 (at projection source)
- ❖ Color Reproduction: 16.7 Million colors/ full frame video
- ❖ Video Input connectors: RGB analog, USB, RCA video, S-VIDEO, VGA
- ❖ Input signal frequency: Fh: 31-80 kHz; Fv: 56-120Hz
- ❖ Video & PC Compatibility: PC, Mac, NTSC, PAL, SECAM HDTV: 480i/480p, 720p, 1080i

SPECIFICATIONS

contnd

- ❖ Image Translucency: Controllable visibility
- ❖ Operational Sound Level: 38 dB
- ❖ Electric Power Voltage: 95-115 or 220-240V VAC
- ❖ Electric Power Frequency: 47-63 Hz
- ❖ Electric Power Consumption: 350W
- ❖ Working Temperature Range: 55F (12C) to 95F (35C)
- ❖ Working Humidity Range: 25% – 95%
- ❖ Weight: 34.5lbs/ 15.7kg
- ❖ Dimensions: (W): 28.3", (D): 15.9" [29.8" expanded], (H): 9.3" (71.8cm x 39.6cm [76cm expanded] x 36cm)
- ❖ Warranty: six months limited parts and labor

PRICING

- still quite an expensive toy ,not everyone can afford it
- If you want to buy it
 - Heliodisplay M2: \$18,100
 - Heliodisplay M2i: \$19,400
- If you rent it for – 1 week – 2 weeks
 - Heliodisplay M2 – \$9,600 – \$13,800
 - Heliodisplay M2i – \$12,800 – \$14,800

FOG SCREEN



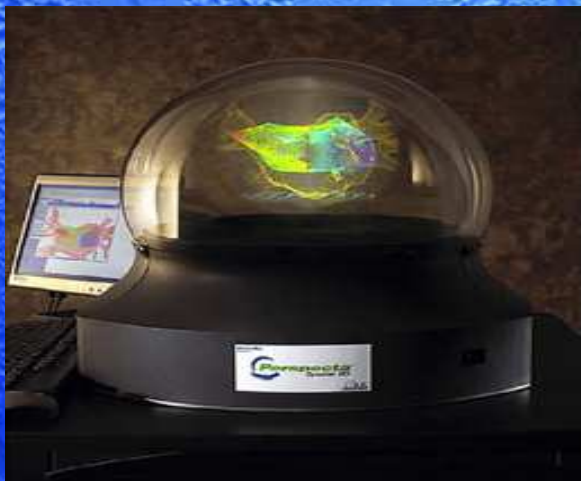
- Finnish company FogScreen has begun volume production of its unique walk-through projection screen.
- The FogScreen Inia screen projects high-quality images onto a thin laminar air flow of water vapour.
- The FogScreen feels wet and cool to the touch
- Creates an effect of the computer generated images floating in thin air



- Can be used in the development of special effects displays and airborne advertising media, walk-through or drive-through posters, as a high impact advertising medium in malls, airports and mass audience events.

PERSPECTA

- Actuality Systems, Inc. has developed an incredibly high performance three-dimensional display nearly 100 million voxels and interactivity at your fingertips.
- Professionals in pharmaceutical design, MCAD, and medical imaging can see data floating inside of the clear viewing dome.
- Your volumetric imagery can be viewed from any angle, without cumbersome goggles.
- it is mainly used for medical purposes.



ADVANTAGES

- Other companies have developed similar technologies .A Finnish company, FOGSCREEN, has developed a machine that creates an image in midair by projecting an image onto a screen of water vapour between two layers of air
 - ❖ It can be touched, and even walked through
 - ❖ Uses water vapour, so touching the “screen” feels wet
 - ❖ fog screens are not yet interactive.
- ACTUALITY SYSTEMS, has created a true 3D image that floats in midair,PERSPECTA
 - ❖ This image is enclosed and of a lower resolution than a heliodisplay.

DISADVANTAGES

- Screen is essentially air, so it can become distorted with too much air movement in the room.
- The contrast ratio of the heliodisplay is not that good compared to the modern day plasma or LCD TV's

FUTURE ENHANCEMENTS

Two main problems of the heliodisplay technology are the contrast and the flickering.

Future models are being developed which will be free from these defects. Furthermore a mobile-sized heliodisplay is being developed.

APPLICATIONS

- Advertising and Promotion, e.g.: trade shows; in-store displays; museum, movie and casino displays; theme parks.
- Collaborative Decision Making, e.g.: board meetings and presentations; air-traffic control; military command and control; architectural and engineering design; teleconferencing.
- Simulation & Training, e.g.: virtual targets; pre-operative planning; virtual surgery.
- Consumer, e.g.: video games; home theatre.

APPLICATIONS

contnd

- Heads-up displays in new fields, e.g.: a patient's vital signs could hover above the chest during open heart surgery.
- Build one into a door jamb and have a walk through image or virtual privacy screen.
- An in-store end cap advertising display and demonstration through which the customer can reach and grab shown product.
- Build the Heliodyisplay into furniture, e.g. project from desk.

CONCLUSION

The heliodisplay is a relatively new technology and is still being developed. Though it has some flaws the attention that it brings is enormous. Its various applications such as in advertising, a board room etc suggests that its future scope is very large.

Several other thin air-displays are available but heliodisplay out classes them and as a result it has more market value.

Many people are still skeptical about the extent to which this product can be used: some have even dismissed it as an interesting but useless piece of technology.

REFERENCES

- The IO2 website: www.IO2.com.
- www.scribd.com.
- David Bernstein, making something out nothing.
- "Interactive 3D Display: its here!" article from OhGizmo.
- Woehburk-visible perfection
- sci-fi projections, Article from CBC, March 22, 2007



THANK YOU

The background of the slide is a solid blue color with a pattern of numerous small, white, water-like droplets scattered across the surface, creating a textured, condensation effect.

QUERIES???