



VIRTUAL REALITY PLAYERS

# What is a VR Player?

Virtual reality (VR) is a technology which allows a user to interact with a computer-simulated environment. Most virtual reality environments are primarily visual experiences, displayed either on a computer screen or through special stereoscopic displays, but some simulations include additional sensory information, such as sound through speakers or headphones.

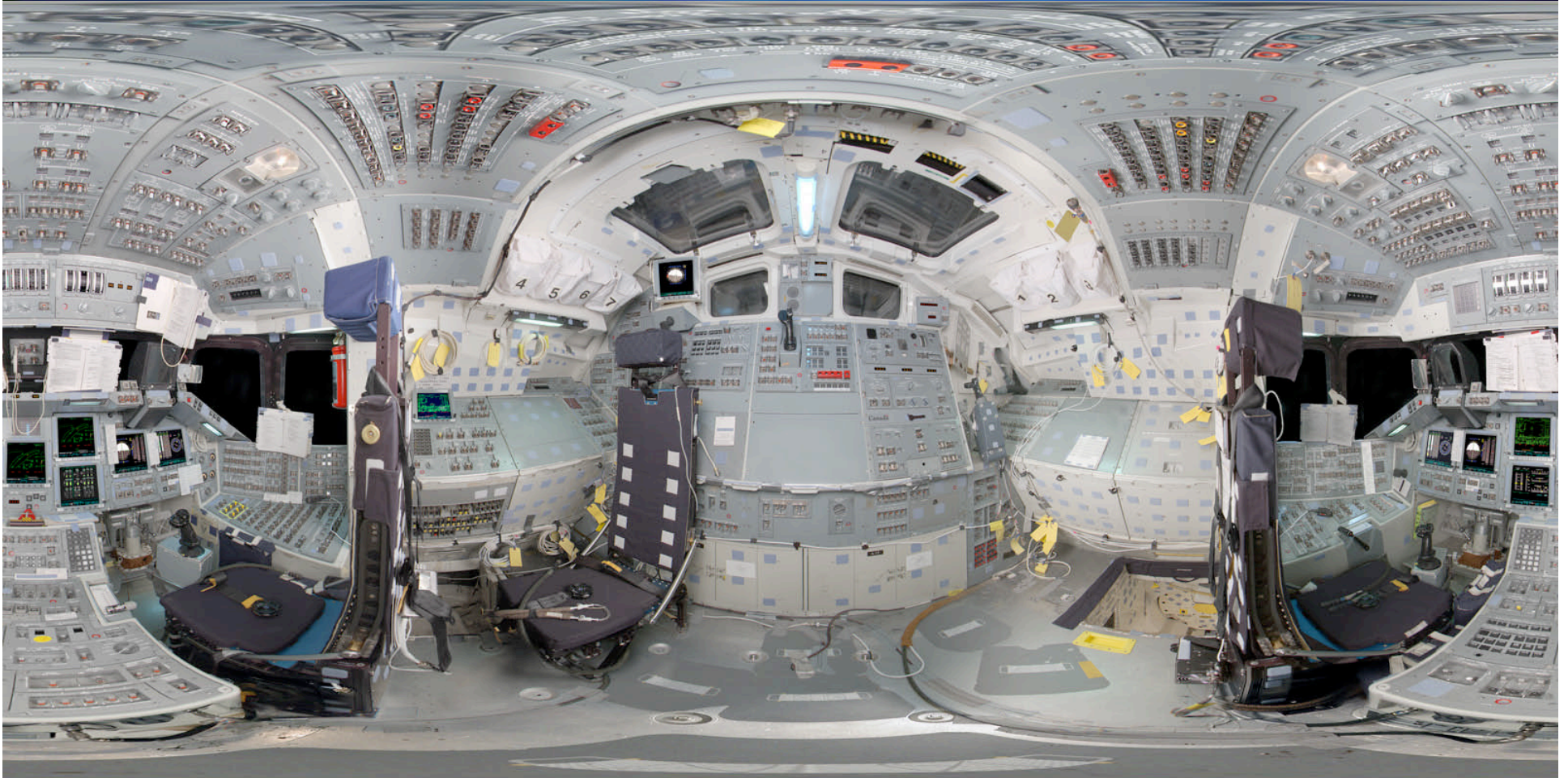
Panoramic VR is a type of Virtual Reality that uses panoramic or spherical images to provide a photo-realistic interactive experience.

# What does a VR player do?

1. Allows a user to interact with the image. Pan & tilt.
2. Corrects panoramic distortion !!!
3. Allows a user to change the field of view digitally...  
Like a digital Lens.
4. Adds interactive linking. Hotspots.



# The Panoramic Image



Without Correction

With Correction

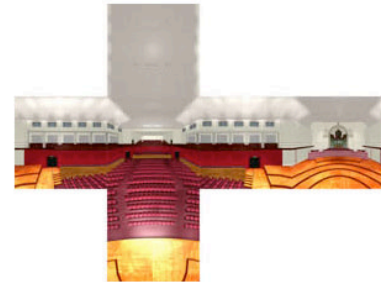


# Basic Types of VR

## Cylindrical VR



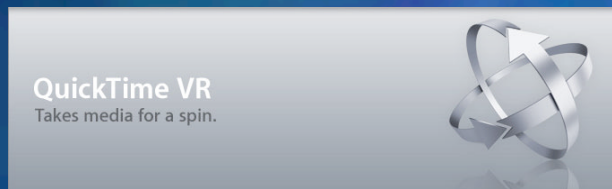
## Spherical VR



## Object VR



# Software for Playing VR



QuickTime VR

QuickTime Based  
Objects + Panos



ImmerVision

JAVA Based  
Objects + Panos



Flash VR

Flash Based  
Objects + Panos



IPIX

ActiveX  
Spherical Only

# Software for Making VR



ImagePrep  
[www.panoscan.com](http://www.panoscan.com)



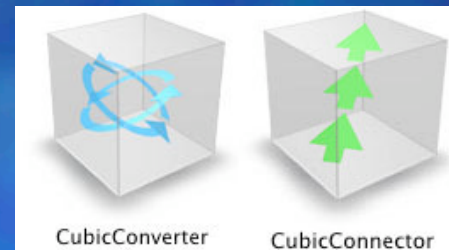
VR Toolbox  
[www.toolbox.com](http://www.toolbox.com)



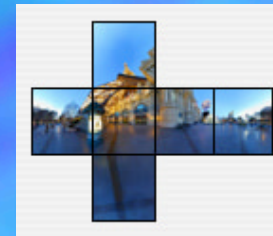
TourWeaver  
[www.easypano.com](http://www.easypano.com)



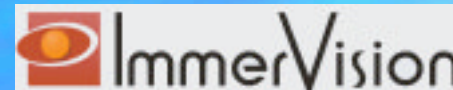
Flash VR  
[www.flashvr.de](http://www.flashvr.de)



ClickHere Design  
[www.clickheredesign.com](http://www.clickheredesign.com)



MakeCubic  
<http://developer.apple.com/quicktime/quicktimeintro/tools/index.html>



[www.immervision.com](http://www.immervision.com)



# Tips for Making VR

1. Most VR authoring programs accept 360 degree panoramas or 360 degree equirectangular images.
2. All VR authoring programs expect your panoramas to be a perfect seamless 360.
3. All VR authoring programs ignore color profiles.
4. All VR authoring programs work only in 24 bit color. (8 Bits per color.)
5. Object movies are NOT panorama based. Object movies are NOT roll out scans. They are stop motion movie sequences. Object movies are shot with conventional cameras or video cameras. Object movies are comprised of a sequence of stills.
6. Most VR Players use JPEG compression to compress the image. JPEG works best for panoramic VR players. Always retouch with uncompressed files then compress to JPEG at the end of the process when authoring the VR file.
7. Hotspots and interactivity are added AFTER the VR is created.

# Wrapping & Blending Panoramas

Tutorial: [www.panoscan.com/WB.pdf](http://www.panoscan.com/WB.pdf)

Slides: [www.panoscan.com/VR.pdf](http://www.panoscan.com/VR.pdf)

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