# Technology Tuesday

## Description

Toysâ€¦.

Virtual Reality headsets have been a technology I watch from afar.Two things have made them â€œnot just yetâ€• for the run of the mill users: 1) Cost! and 2) Resolution. The second actually drives the first, when you consider the expense in making a small LCD, or now OLED, display less than an inch square have the same resolution as most people run on their laptops and 15/17â€³ LCD monitors: 1024Ã—768 pixels.

I once was working on the Computer Aided Dead Reckoning Tracer project, when they used an upended Mitsubishi 37â€³ TV as the viewing surface. There was a quest to replace the CRT technology with a digital projector by the engineers working the project, and at the time, they were lucky to have a 800Ã—600 pixel display for the projectors (similar issue with the LCD in the projector). Pushing the manufacturing process to make 1024Ã—768 yielded significant failure rates in the LCDs produced. That was 1997-8.

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Things have come a lot further now, and Vuzix has a series of head mounted displays (HMDs) that are affordable and can display a 1024Ã—768 picture to each of your eyes. Not surprisingly, they also build such equipment for the military/tactical market, which, most likely has been a major factor in driving the cost down for the run of the mill consumer by expending military R&D dollars.



The one headset in particular that I have â€œmy eyes onâ€• (maybe I should say â€œinâ€•) is the iWearYR920. Besides being able to take a VGA display feed, it also has head tracking built in. That means the unit, while worn, sends a signal back via the interface to tell the computer which direction you are â€œlookingâ€• in the virtual world. Big deal? Yes, it is. For games like Flight Simulator X from Microsoft (check out a video of the VR920 in action with FSX here), when you look around your cockpit, or the outside of the cockpit, the display shifts as though you were looking there, without the operator having the slew the picture about artificially with key strokes. That adds another layer of realism to the gameâ€¦.
Specs:

Technical Specifications:
Twin high-resolution 640Ã—480 (920,000 pixels) LCD Displays
Equivalent to a 62â€³ screen viewed at 9 feet
24-bit true color (16 million colors)
Visor weighs 3.2 oz.
60 Hz progressive scan display update rates
Fully iWearÃ‚Â® 3D compliant and supports NVIDIA stereo drivers
Built-in noise canceling microphone for Internet VOIP communications
Built-in 3 degree of freedom head-tracker
USB connectivity for power, tracking and full duplex audio
Analog VGA monitor input
Support for up to 1024Ã—768 VGA video formats

Features:
6-foot slim, single cable design with miniature USB and VGA connectors
Large field-of-view optics to allow a fully immersive experience
iWearÃ‚Â® 3D enabled for automatic 2D/3D control; no buttons required
With built-in microphone users can communicate from anywhere in the world as if they were standing next to each other (or inside the game)
Integrated 3 DOF head-tracker lets users look around inside virtual worlds as if they were there

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User Adjustable:
Removable, flexible headphones
AccuTiltÃ¢â€žÂ¢ viewer pivots up to 15 degrees
Soft, comfortable, hypoallergenic nosepiece extends out up to 3/8â€³
Custom fit headstrap included for extra secure fit

Supported Media:
Plug and play video with virtually all PC applications
Thousands of pre-existing applications in full 3D (supported by NVIDIA stereo drivers)
The VR920 will completey change the plethora of massively multiplayer applications from World of Warcraft to Internet chat in virtual worlds

Advanced Optics:
32 degree field of view
3/4â€³ eye relief and 5/16â€³ eyebox
2.5â€³ Intraocular Distance (IOD)
Color corrected 10th order aspherical lense with diffractive surface

Box Contents:
iWear VR920
Headstrap
Drivers, manual and software disc
Quick start guide with warranty and safety instructions
Lens cleaning carrying pouch

Price tag? SRP $399. Not cheap, butâ€¦not like the $24,000, many, many lb beast I used to find around the net that would do the same thing in military grade simulation applicationsâ€¦

In case you donâ€™t need head tracking, but are in the habit of watching movies, but have the significant other that doesnâ€™t share your choice of movies, or you are on the road/in the air a lot, or just bored and sit and watch movies, there is the AV920 for a savings of $50 @ $349 to plug into your DVD player.

What does it look like? 62â€³ display at 9 feet. Like sitting in the TV/Living Room with the $3000+ dollar big screen. See, itâ€™s really affordable if you explain it to her that wayâ€¦and she wonâ€™t even have to watch it because you grabbed the remote first and you saved at least about $2650!

Whatâ€™s not to like?

You knowâ€¦it could be like this:




Read more about this monstrosity hereâ€¦

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admin