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**Virtual Reality Update**  
**September/October, 1993**  
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Contents:

Magazine/Newsletter Articles  
Journal Articles  
Review Article  
Conferences: VRAIS, SIGGRAPH, Proceedings of the Human Factors Society, IEEE Symposium on Research Frontiers in Virtual Reality  
On The Net

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Sauerwein, T. A. and Molino, J. A. (1993). Simulating the Replacement of Spacecraft Modules by Means of a Telerobot. In Proceedings of The Human Factors and Ergonomics Society 37th Annual Meeting Designing for Diversity, volume 1 (pp. 43-46). Santa Monica, CA: Human Factors Society.

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Zhai, S. (1993). Investigation of Feel for 6DOF Inputs: Isometric and Elastic Rate Control for Manipulation in 3D Environments. In Proceedings of The Human Factors and Ergonomics Society 37th Annual Meeting Designing for Diversity, volume 1 (pp. 323-327). Santa Monica, CA: Human Factors Society.

#### IEEE Symposium on Research Frontiers in Virtual Reality

Note: Because this conference just occurred, I have simply noted the presenter and the paper titles. For more information call the VIS93 phone: 510-423-9368 or send email to Vis93@llnl.gov

IEEE Symposium on Research Frontiers in Virtual Reality, October 25-

26, 1993, San Jose, CA. Symposium Co-Chairs: Steve Bryson and Steve Feiner.

Gossweiler, R., Long, C., Koga, S. and Pausch, R. DIVER: A Distributed Virtual Environment Research Platform

Iwata, H. and Noma, H. Volume Haptization.

Hubbard, P.M. Interactive Collision Detection

Nemire, K. and Ellis, S.R. Calibration and Evaluation of Virtual Environment Displays

Pausch, R., Shackelford, M.A. and Proffitt, D. A User Study Comparing Head-Mounted and Stationary Displays

Rosenberg, L.B. and Adelstein, B.D. Perceptual Decomposition of Virtual Haptic Surfaces

Loomis, J.M. Understanding Synthetic Experience Must Begin wth the Analysis of Ordinary Perceptual Experience.

Cruz-Neira, C., Leigh, J., Papka, M., Barnes, C., Cohen, S.M., Das, S., Engelmann, R., Hudson, R., Roy, Trina, Siegel, L., Vasilakis, C., DeFanit, T.A. and Sandin, D.J. Scientists in Wonderland: A Report on Visualization Applications in the CAVE Virtual Reality Environment.

Loftin, R.B., Engelberg, M., and Benedetti, R. Applying Virtual Reality in Education: A Prototypical Virtual Physics Laboratory.

Song, D. and Norman, M.L. Cosmic Explorer: A Virtual Reality Environment for Exploring Cosmic Data.

Hart, J.C. On Recording Virtual Environments.

Cohen, M. and Koizumi, N. Virtual Gain for Audio Windows.

Speigle, J.M. and Loomis, J.M. Auditory Distance Perception by Translating Observers.

Astheimer, P. What You See is What You Hear.

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## **On The Net**

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Jerry Isdale's revised version of What Is Virtual Reality? A Homebrew Introduction and Information Resource List, Version 2.1, Oct. 1993:

The primary distribution points for electronic form of this paper are:

- 1) CompuServe CyberForum as 'whatvr.zip'
- 2) ftp site sunee.uwaterloo.ca in the pub/vr/documents area as whatisvr.txt
- 3) ftp site ftp.u.washington.edu in public/virtual-worlds/papers as whatisvr.txt

Also available is What is Group 3, an introduction to the Group 3 Virtual Reality Development Project. Group 3 has since been replaced by the Cyberforum Workgroups. The electronic text is available at the sites listed above as 'group3.txt'.

For those of you fortunate enough to have access to the Mosaic interface on a Mac, XWindows, or Windows environment:

Cruz-Neira, C., Leigh, J., Barnes, C., Cohen, S.M., Das, S., Engelmann, R., Hudson, R., Papka, M., Roy, T., Siegel, L. Vasilakis, C., DeFanit, T.A. and Sandin, D.J. Scientists in Wonderland: A Report on Visualization Applications in the CAVE Virtual Reality Environment.. Available at <http://www.ncsa.uiuc.edu/EVL/docs/cave/vrpaper/report.html>

The VR homepage at the WWW site is now at:  
[http://www.ncsa.uiuc.edu/Viz/VR/vr\\_homepage.html](http://www.ncsa.uiuc.edu/Viz/VR/vr_homepage.html).

>From the VR homepage, you can take a look at the Beckman Institute, the Visualization Laboratory, the CAVE home page, as well as:

Visualization applications used by the NCSA VR Lab: The Virtual Backhoe/Wheel Loader, The Cosmic Explorer, The Redshift Survey, Navigation through Information Space, and the Virtual Director.

Tool Development-- dataflow application programs and Virtual Devices

NCSA VR Lab Hardware

Bill Sherman, the document author, also gives you the ability to connect to relevant USENET newsgroups and related ftp sites. He's even

working on a way of displaying comic strips that reference Virtual Reality, getting permission from the copyright holders of the series of Doonesbury strips regarding VR, for example.

The Mosaic interface is the cutting edge of cyberspace exploration. "Mosaic is an Internet-based global hypermedia browser that allows you to discover, retrieve, display documents and data from all over the Internet."

--NCSA Mosaic Demo Document  
(<http://www.ncsa.uiuc.edu/demoweb/demo.html>)

For those of you who do NOT have direct connection to the Internet and can't use Mosaic. You can ftp to NCSA's site at [ftp.ncsa.uiuc.edu](ftp://ftp.ncsa.uiuc.edu), take a look at the VR directory there. It's not multi-media, but it's information.

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