
"SURFS UP"

Things to see and do on the Internet

Issue #2 - May 1995

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Welcome, to this the second edition of our Net travels.

In this edition we will be looking at our very own World Wide Web pages, some info on Disney's latest VR experience, William Gibson finally hits the big screen and the Web, as well as a new site from our good friends at Mecklerweb.

And of course our highlight series of articles, were we will be looking at VR on the Internet, in the real sense of the word.

CYBERTERM, VRML, CDK2, WEBOOGL, CYBERHEAD, and other such terms are hurrying to become second nature to us in the next few months. We will take you through most of the options in this exiting new field.

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But first.....

The Virtual Reality Association Web pages

<http://netspace.net.au/~splatt/vra/vra1.html>

As mentioned earlier, the VRA finally has its own set of Web pages up and running.

Surf on over and have a look. Check out our list of interesting and usefull sites, get information on the VRA, find out more about VRML and join the mailing list for Cyberspace '95 (the biggest VR Expo in the Southern Hemisphere).

These are only a few of the interesting things you can see and do on our very own home page.

(PS. - Keep an eye out for our first VRML page. Grab the viewer from Silicon Graphics and surf the Web in 3D.)

(PPS. - As is becoming the norm with web pages these days, for optimum quality, view with the latest version of the Netscape browser "n16e11n". Available from Netscape's home page at "<http://www.netscape.com>" Comes in the following flavours, Windows, Mac, and Unix at the moment.)

(PPPS. - Kudos(look it up in the dictionary) to VRA member "John P. Baker" from Monash Uni, for being the first person to leave us a message from our message section on our site. As a reward John, your site gets to be the first on our "Members Home Page's" Web page. Check out John's Home Page at <http://rdt.monash.edu.au/~johnb/>. Hope you have many happy hits John..)

Disney's Aladdin

<http://www.lightside.com:80/~dani/cgi/offers/imagineering/VR-job-posting.html>



This site is actually a posting for a job available at Disney's Imagineering Division. But It does contain a few images of Disney's latest VR ride, based on their hit animation film, Aladdin.



For more information on the setup at Disney Imagineering, read the article in the March/April edition of "VR World" magazine. Available on the net at "<http://www.mecklerweb.com/mags/vr/v3n2/toc.htm>".

William Gibson's "Johnny Mnemonic" On the big screen



Keep your browsers pointed in the direction of "<http://www.mnemonic.sony.com>" around the middle of May.

The film is finally finished, and this is the official Web page.

Full of "Images"(including one of Gibson), "Quick-Time movie clips", and "Audio samples". As well as information and photos on the cast and crew, the production details, a downloadable copy of the Cyberspace Developers Kit 2 "World Viewer" (see the CDK2 article), merchandise information and of course, the NetHunt.

"Jack" into it, and get involved in the future of product marketing.

VR Metropolis

<http://www.mecklerweb.com/mags/vr/vrm/newvrm.htm>

Well our friends at Mecklerweb have done it again, providing another worthwhile site to those of us interested in VR.

The "VR Metropolis", currently being run by Joe Dysart, Editor of VR Monthly and also Business/Entertainment Editor for "VR World" magazine, is turning into a hive of activity. Containing information on new VR products, VR conferences, sites of interest (the VRA site was featured in the VRM newsbytes section on the 29/3/95), and other things that will no doubt be of interest to many of you out there.

I definitely recommend surfing over and having a look.

PS. "VR Monthly" - A monthly journal designed for the busy professional. Each month it will offer feature length articles on key industry markets, such as : VR in Medicine, advertising, the military, design, education, etc..

In addition, the newsletter also offers feature-length pieces as warranted on VR in training, psychology, computer networks, 3D sound, technology transfer, space, architecture, museums, theater, garages, disabilities and every other facet of work and play that will ultimately migrate in some way to the VR paradigm.

Moreover, readers can look forward to more than 20, short "Industry Buzz" nuggets each month, which encapsulate the latest in products, services and strategies of VR's movers and shakers. Plus, there is a VR Calendar page chronicling VR's crucially important conferences, trade shows, and meetings.

For a free sample of the May newsletter, simply send your email address to dysart@delphi.com. Your phone, fax and business address would also be appreciated - but are not required.

Contact:

Joe Dysart, Editor and Publisher, Virtual Reality Monthly

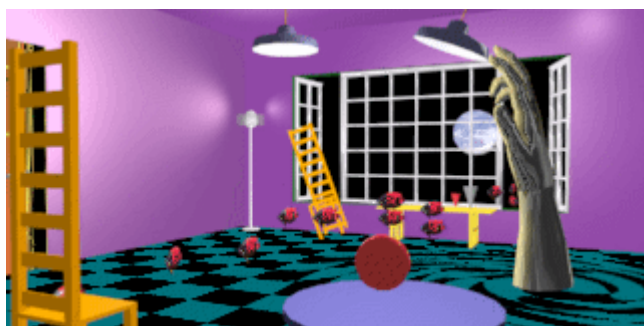
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CDK2 - Cyberspace Developers Kit 2 on the net

<http://www.bluerock.com/cdkwv/>



files over the net.

You've read about it in the software review, now heres your chance to grab it and use it.

AutoDesk have kindly released the Cyberspace Developers Kit 2 "World Viewer" as freeware on the internet.

The "World Viewer", when configured with your web browser as a helper application, allows you to look at .3ds (3D Studio) and .dxf (AutoCAD)

Unfortunately, you must be running either Windows 3.1, 3.11 or NT to utilise this little baby. In

addition to the "World Viewer" you will also need a copy of "WinG", if you are using Windows 3.1, a copy of "Win32" is also required..

And...you probably guessed it, it does run slowly, even on a 486 DX2/66 with 8M of ram. But at least its a start in the right direction.



Cyberterm - PC based networked cyberspace

<http://wattle.itd.adelaide.edu.au/~snoswell/mjs.html>

What is Cyberterm?

Cyberterm has been variously described as a 3D BBS, a multi-user flight simulator/ games programming platform, a VR environment, an operating system, a cyberspace engine, a game, an application, a network, a 3D language, a distributed 3D version of MS Windows, a communications protocol or a MUD (multi-user dungeon).

The main aim in writing Cyberterm (CT) has been to provide a low cost, working, multiuser, 3D based environment to the "man in the street", the "average" PC user. The use of the term VR can be misleading. CT has "hooks" for head mounted displays (HMDs), glove and other haptic interfaces, but the simple truth is that most people don't have these devices and wont for a few years to come. When such devices are cheaply available, you can bet that all the CT users out there will be able to use them with a minimum of effort. But for now, CT is mouse, keyboard and screen based.

What Can it do?

The initial aim in the development of CT was to produce a 3D based BBS. The desire not to be constrained by the design and requirements of current BBS systems led to the design of a completely extensible protocol and architecture, to the point where the current system can have unlimited servers and clients connected in a heterogeneous network, inhabited by autonomous, user programmable agents and objects.

BBS Basics

The basic BBS functionality is there. Chatting, mail, conferences and file archiving.

This is where the similarity stops.

You chat to people by sitting around in groups on park benches or in rooms. Real rooms that is, they're not just called rooms. You have to open the door and go in. And the park has trees and birds and grass. Forget the text based descriptions, in CT you can actually **see** the people you're talking to. Mail can be sent as solid 3D objects in envelopes, delivered to the recipients letterbox. Postings to advertising boards appears as pinned notes on a public pin-up board. Files are accessed as 3D "trees" and libraries of books. Data is transfered invisibly or as "corporeal" objects that you can manipulate, wield and exchange.

All interaction with objects is performed by message passing. All objects have some rudimentary "intelligence" in how they respond to messages. Types of objects are grouped into classes that have hierarchical, inheritable behaviour characteristics. Objects can be completely autonomous, moving around the network between machines as independant entities, cloning themselves or making other, completely different objects. These entities can also access external devices and files to enable real

world interactions.

Service Providers

As the agents within CT can access external devices, real world interfacing to banks, medical databases, stock market prices, takeaway pizza outlets, teleshopping services, telepresence vehicles and devices, airlines ticket booking agencies and other traditional "remote access services" can now be performed via the CT network.

Fully User Programmable

All registered users receive programming documentation to show you how to build your own agents and worlds. A number of advanced examples such as artificial life agents that eat, breed and mutate, interactive 3D file management of your local disk and hybrid meta tools for construction work within your virtual environments are all included with full source code.

What does it run on?

Recommended is a 486DX/33 with VLB graphics (64k colours) and 8 Megs or RAM and V42bis modem running MS Windows 3.1. Optional is WinG (for 50% better speed) or Windows95 when it arrives. Pending additions include direct TCP/IP (via SLIP, PPP or Ethernet), 6D mouse and HMD support. Speed in testing is anywhere from 1 to 30 frames a second (lit, smooth shaded, textured polygons), but depends immensely on your hardware and the scene (of course!).

How do you get Cyberterm?

CT is currently in entering the alpha testing phase. It is expected to be released as a complete functional system in mid 1995. CT will be shareware, but unregistered users may use the fully operational system on any standalone computer. The registration is only necessary to connect to any of the many servers that are popping up in the US, Europe and Australia (and to receive the user and programming manuals!). Unregistered users may connect to these servers as guests to test out the multiuser environment.

The first release will be announced in sci.virtual-worlds, the Compuserve VR forum, and a number of BBS systems throughout the world.

A CT maillist exists which has very low volume but will notify people of major announcements. Mail the author to be added to the list.

Major project contributions have come from Nigel Dobson-Keeffe, Paul Waclawic, Philippe Van Nederveelde, Jeff Prothero and many, many others.

Screendumps from Cyberterm 1.0 Alpha

These images are taken straight from the current version, captured from a 486DX/33 with 8 Megs RAM and 1 Meg VLB graphics card running at 800x600x64k.



A shot of the whole PC screen showing the main 3D window, the radar window, the status window and the incoming messages window (not email, that's another window again). This shows the display of text created dynamically and projected onto a

surface. Notice also the "picked object" field in the status window which allows you to select an object in the image with the mouse and then send them messages.

Just the 3D window, a wide shot highlighting the use of textures. The objects floating off in the distance are targets used in a shooting game demonstration application written in Tcl/CT.



For More Information Technical Summary at

["http://wattle.itd.adelaide.edu.au/~snoswell/ct_tech.html"](http://wattle.itd.adelaide.edu.au/~snoswell/ct_tech.html)

Applications

A hypothetical user session with CT, based on the current version and updates until mid 1995 is described in this "storybook" article ["CT - A Hypothetical Session"](#) (18k).

Some articles (published and unpublished) on CT and previous maillist postings can be found at <ftp.adelaide.edu.au/pub/cyberterm>.

NOTE April 27th, 1995: The CT server port to Linux is complete. We'll be using this as our test server platform here at Cybertyerm Pty Ltd from now on. Good progress has been made on the programmer's documentation but the user doco is lagging behind a bit. Several sections of CT are now being rewritten in C++ (we only had a C compiler for QNX), mainly to use the MFC classes for UI stuff.

NOTE April 20th, 1995: We have started porting the server to Linux (a pretty trivial task as it turns out) as it's cheaper(!) and so well known/accepted. We've added sound (WAV files) for events. Up to 4 simultaneous sounds. The sound gets a bit broken if the frame rate drops below about 4 fps on my 486DX33 with a Sound Blaster 16. Any 8 bit Wave device installed under Windows will work. We are also exploring a voice compression package for chatting aurally. We're refining a tank simulation game. (Which compelled us to add sound so we could hear the explosions :-)) and allow variable height terrain as up till then we forced users to move at ground level, despite agents being able to fly around, but that's another, longer story!). Tests on the same machine with 2000 active agents (trees growing in a forest) showed agent execution was only 5% of CPU load, the rest being spent on rendering and display. This indicates a server could happily support a world of 100k active objects as well as I/O and a host more inactive objects (on a Pentium type machine with intelligent I/O (buffered) cards, serial or ethernet.

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VRML - Part 2

<http://netspace.net.au/~splatt/vra/vrml.html>

VRML is finally upon us.

The second week of May 1995 brought us the official release of the Silicon Graphics/Template Software's VRML viewer. Just set it up as a helper application with your Web browser, and away you go.

Unfortunately.....as of the writing of this article (14/5/95), the released version only works on a Silicon Graphics based machine. BUT.....Windows 3.1, 3.11, NT, MAC, and various UNIX flavours are due to be released by the end of May. And I for one, just can't wait.

At the beginning of May I attended the official WebFORCE/WebSPACE release by Silicon Graphics, and it was demo'd at the end of the day. I'm impressed. Just click on the right hypertext link, your Web browser fires up the VRML viewer, and your of into a world were you can wander about to your hearts content. Finally bringing VR to the internet.

Many platforms were suggested in the early development stages, but the "OPEN INVENTOR" system, developed by Silicon Graphics was the one they finally decided upon. Template Software, the company that will be providing the non-SGI VRML browser, are also developing a file conversion program that will be out by June/July. This conversion program will allow you to take 3DS, DXF, and many other formats and convert them to ".wrl", which is the file format that has been decided on.



I could talk about VRML for days on end, so it is probably easier to point you all to the VRML site on our own Web page <http://netspace.net.au/~splatt/vra/vrml.html> for more information. This page has pointers to were you can get the VRML browser, as well as pointers to the quickly growing number of sites that are starting to use VRML on there own pages.

PS. - As I mentioned earlier, keep an eye out on the VRA Web page for our very own VRML file. Coming soon...



Happy surfing dudes and dudetes.....!8r