Don Lancaster's

RESOURCE BIN

number sixty five

Some video game tools and techniques.

Our usual reminder here that the *Resource Bin* is now a two-way column. You can get tech help, consultant referrals and off-the-wall networking on nearly any electronic, *tinaja questing*, personal publishing, money machine, or computer topic by calling me at (520) 428-4073 weekdays 8-5 Mountain Standard Time.

US callers only, please.

I'm now in the process of setting up my new *Guru's Lair* web site you will find at (where else?) *www.tinaja.com* This is the place you go for instant tech answers. Among the many files in our library, you will find complete reprint sets for all of the *Resource Bin* and other columns. Plus a brand new Synergetics Consultant's Newtwork & lots of links to unique web sites.

You will get the best results if you have both *Netscape Gold* and *Acrobat Reader 3.0* installed. This new reader does utterly amazing things online.

Video Game Resources

The more things change, the more they stay the same.

From day one, video games always have been about pushing the limits of computer systems. Doing more with less. Lots more with lots less.

Way back in 1981 or so, I taught a father-son student team who did not know that it was flat out impossible to do outstanding live animation on an Apple II computer. So they went on ahead and did it anyhow.

Their mind blowing four-cycle gas engine simulation was done by using sixteen HIRES screens. Their screens would advance at a speed set by the game paddle. Instead of remapping each screen, only the needed *changes* got mapped. By using plain old brute force linear LDA #VAL STA LOC code. Tediously done by using nothing but Apple's built-in miniassembler!

But delivering blinding speed.

And, in one swell foop, eliminating all the time-consuming complex calcs and remapping that "everybody" flat out "knew" had to be used for Apple HIRES screen byte imaging.

This got followed up by adding my *vaporlock* screen deglitching and some light CPU demand sound effects from the *obnoxious sounds* part of my *Apple Assembly Cookbook*. Their final result was some screaming fast and flawless animation. Which went on to become an educational software venture.

And two entire careers.

Alas, the days of XORing sprites are long gone. And winning video games today takes lifetime dedication from a team of specialists. Plus many dollars worth of funding. And great heaping bunches of luck. But underlying it all is plain old limit pushing. Along with knowing where to go to get help.

A new revolution is about to take place in video gaming, for DVD and MMX should completely and utterly blow away anything ever seen before. So there are incredible opportunities newly emerging.

Let us look at a few rather unusual video game resources…

Some Books

One useful set of frequently asked questions on game design appears as *www.cs.fsu.edu/~casey/design.html*

Classic titles here include Crawford's *Art of Computer Game Design*, Zocci's *How to Sell Your Game Design*, Levy's *Computer Gamesmanship*, Epstein's *The Theory of Gaming and Statistical Logic*, Ellington's *Handbook of Game Design*, Peek's *Game Inventor's Handbook, Game Design* by Jackson, or else Dunnigan's *Complete Wargame Handbook*.

Amazon Books at *www.amazon.com* has a few hundred video game books. The trouble is that all the real insider goodies appeal to a limited audience and get stale real fast like. So books are often uselessly out of date.

One newer book is *Developing Java Entertainment Applets*. By J. Withers and published by *Wiley*.

This one includes a fine summary of the basic fundamentals of modern video game design. But Java's highly touted "new" features of predefined objects, full device independence, and threading have long been available in good old PostScript. Sigh.

By far your "best" language for any video game is raw machine. Nothing can possibly *ever* beat it for speed and performance. Sadly, raw machine gets a tad cumbersome and is not portable. Typical game developers opt for C++ instead. While Java cannot compete on speed or complexity, its flexibility and web friendliness makes it rather attractive for net-related gaming.

Another new book is Josh White's *3D Design Graphics*. It is on creating real time 3D models for games and virtual reality. Published by *Wiley*.

Game Developer

The leading "where it's at" center of the video gaming industry appears to be that *Game Developer* magazine from *Miller Freeman*. A recent issue covered inside details on the MMX bus system, benchmarking 3D accelerators, game network API's, collision physics, and manipulating 3D matrices.

Their usual subscription price is $34 per year. Their web site can be found at *www.gdmag.com* Ads here include everything from career opportunities to development software to 3D view systems to object digitizers

They also put on the annual *Video Game Developer's Conference*. You just missed the one for this year, but you can watch continuing issues of *Game*

Developer to pick up the next show. Or can call (415) 948-2744 for info.

Three sister mags are *InterActivity*, *3D Design*, and *DV*. The latter is short for *Digital Video* is strong on nonlinear editing and software solutions.

Videogame Advisor

This is the oversized slick shopper tabloid that serves as the newspaper for the interactive gaming industry. It is mostly about who is shipping what when. Along with what is selling and what is not. Including stock reports, piracy diatribes, and succint reviews from a marketability viewpoint.

This trade journal is usually free to qualifying insiders.

Randy Fromm

One superb source for service info and training videos on classic arcade video games is *Randy Fromm*. His new website is *http://randyfromm.com*

You will also find extensive online tech notes on everything from fixing power supplies to flipper sources.

As well as his *Coin Op Yellow Pages* with hundreds of hot links.

Speaking of which…

Coin Ops

The leading two magazine for folks running coin operated amusement or game routes are *PlayMeter* and *RePlay*.

Star Tech Journal is big on service and repair info. Coin operated devices also appear in *Automatic Merchandiser*.

User Mags

There are scads of newsstand mags for video game users. Mostly reviews, ratings, and ads for new games and playing aides. Along with hints and cheats. Most of these offer both online and printed versions.

A few random samples of these do include *Coming Soon, Computer & Net Player, Computer Gaming World, Digital Diner, Electronic Gaming Monthly, PS Extreme, PC Gamer, GamePro, Megaplay GamePower, Game Hits, Inside Games & Entertainment Update, Home Computing & Entertainment, NEXT Generation, PC Games*, and *Pyramid.*

Along with one well done labor of love pub called the *Utopian.*

Links to many of these mags are at *www.cet.com/~mfloyd/lnk_mag1.htm*

Web Sites

You may find the *Video Game Links* at *http://www.videogamelinks.com* to be useful. Everything is here from books and mags to newsgroups to other link sites. Listed for one-stop surfing.

Also look at *GEO*, short for *Gaming Enthusiast Online.* You can visit it at *http://www.gaming-enthusiast.com* Also try *http://www.allaboutgames.com* And maybe the great assortment of links at *http://www.gamepen.com*

There's also an *Imagine Games Net* at *http://www.imaginegames.com/* that you might also find of interest. This one is claimed to be the world's most visited online resource and community for all video and computer games.

Quite a few video game developer support links are at *www.execps.com/~ireplay/links.html* And *www.vgol.com* feels they are the most comprehensive game search site.

An *Online Gaming Review* site is up at *www.ogr.com*

Newsgroups and Newsletters

Psygame is an interesting computer game newsletter. Which is intended for serious reserchers into the effects of games on human development and behavior, instruction enhancement, and human and game interactions.

Be sure to sound professional when you try to subscribe, or they may not let you in. The application website is at *http://weber.u.washington.edu/~chet/psygame.html*

Here's a sampler of the video game newsgroups…

> *alt.binaries.games*
> *alt.games.video.classic*
> *alt.games.video.import.japanese*
> *alt.games.video.nintendo64.faqs*
> *alt.games.video.sega-saturn.faqs*
> *alt.games.video.sony-playstation*
> *alt.games.warcraft*
> *alt.music.video-games*
> *alt.video.games.reviews*
> *alt.videogames*
> *alt.videogames.hacking*
> *rec.games.video.3d0*
> *rec.games.video.advocacy*
> *rec.games.video.arcade*
> *rec.games.video.arcade.collecting*
> *rec.games.video.atari*
> *rec.games.video.cd-i*
> *rec.games.video.cd32*
> *rec.games.video.classic*
> *rec.games.video.colecovision*
> *rec.games.video.intellivision*
> *rec.games.video.marketplace*
> *rec.games.video.music*
> *rec.games.video.nintendo*
> *rec.games.video.sega*
> *rec.games.video.sony*

By the way, I have just uploaded an automated newsgroup access aide to my *www.tinaja.com* as file *newslist.html*

This is easily searched using the usual control-F and provides thousands of instant hot links.

Some Software

There are great heaping bunches of new development software. Let's look at a sample or two: *N-World* calls itself the ultimate 3D game tool. From the *Nichimen Graphics* people. Including animation, rendering, modeling, color reduction, texture mapping, and lots of special effects in one package.

Another offering is *MGL 3.1* from *SciTech*. This one is a Win 95 graphics programming system which includes both 2D and 3D drawing capabilities while doing full rasterization in any standard format. Competing code is *RealMation*. This one generates higher quality real time 3D games.

3D viewing hardware and software is offered by *Nuvision* and *Simuleyes*.

Force feedback joysticks are built and sold by *Immersion*.

Lots more where these came from.

Near Misses

Here is a collection of second tier resources which touch on areas only somewhat video game related…

Loose Change seems to be the best mag about slot machines. *Amusement Business* can help you start your own carnival. *Ragtime* sells coin op player pianos. Plus a variety of orchestrons and assorted other automated music making machines.

We did look at pinball machines in HACK75.PDF. Jukeboxes got a similar treatment in HACK73.PDF, while the electronic collectibles in general are in RESBN24.PDF. All found on the *Tech Musings* library of www.tinaja.com or in those bound reprints shown in my nearby *Synergetics* ad.

Multimedia Wire is a high cost daily FAX or email service for multimedia content developers, publishers, and their financiers. From *Phillips Business Information*. They also do a *Interactive Daily* and an *Interactive Jumpstart*.

This Week in Consumer Electronics, or *TWICE* for short, is primarily for retail trade. It does cover some video game marketing news. *Digital Magic* is a trade journal on the animation and the visual effects which get used for digital entertainment. While *eMedia Professional* touts itself as the mag for electronic media producers.

Vision Systems Design is a new trade journal on the very latest in remote sensing optics. *PC Graphics & Video* covers everything from building a web site to the secrets of 3D textures. *CGW* is short for *Computer Graphics World* and is into subjects from finite element analysis to very large format

plotters to 3D digitizers. While *New Media* mag covers everything from digital video to 3D design tools.

There is a *Computer Game Developers Association* who offer their $75 yearly memberships. Benefits include career assistance and directory listings.

At one time the *Journal of Computer Game Design* had outstanding content. This eventually turned into a labor of love publication known as *Interactive Entertainment Design*, but is now long out of print. Bits and pieces remain scattered in and around the web, while entire reprints and full volume bound sets do remain available from *Interactive Entertainment Design*.

Siggraph is a second major graphics trade show. Where you'll find all the leading edge graphics secrets coming down. Conference proceedings are available separately, or else printed as the fall quarterly volume of *Computer Graphics*, a SIG special interest group

of *ACM*. And short for the *Association for Computer Machinery*.

We saw a lot more of these back in *Mightily Manic Multimedia Madness*. In RESBN45.PDF on *www.tinaja.com*

This Month's Contest

For our contest this month, just tell me about any genuinely useful video game resource which I do not already know about. Or help with this specific problem: Apparently there is a mag called *Multimedia Merchandiser* that I could not pin down at deadline time. Yet it is freely referenced in a dozen warm and fuzzy places.

Can you add any info?

There will be a largish pile of my new *Incredible Secret Money Machine II* books going to the dozen or so better entries, plus an all-expense-paid (FOB Thatcher, AZ) *tinaja quest* for two that will go to the very best of all.

Send all your *written* entries to me

here at *Synergetics*, rather than to *Nuts & Volts* editorial.

Let's hear from you. ✦