The life of a computer game geek by John Reder

Retrogaming Times Monthly - June 2005

Looking back to my first memories of my fascination with computer gaming (Aside from my frequenting local Arcades and playing 'Space Invaders', 'Berzerk', 'Galaxian', 'Asteroids', 'Pac-Man', 'Wizard of Wor', 'Defender', 'Missile Command', 'Warlords', 'Galaga' and 'Tempest') I have faint grade-school memories of playing 'Pong' based TV games in the early 70's before I purchasing my first hand-held electronic game system called 'Merlin' somewhere around 1979 with money I won at a church festival. Merlin was a simple grouping of red lights that were touch-sensitive; it allowed you to play simple pattern based games. After Merlin I obtained a 'Coleco Football', 'Sub Chase', 'Battlestar Galactica', 'Simon' and then a cool robot (8 track tape player) named '2-XL'! Of course, this was all before I discovered a much more complex system by Magnavox named 'Odyssey 2'!

Odyssey 2 introduced me to a whole new world of cartridge based, color TV gaming. I received if for Christmas in 1979, I believe it was the same year my younger sister received her 'Microvision'. Over the next few years I lost myself in all of the Odyssey 2 games that I could find. My favorites were 'Pick Axe Pete', 'War of Nerves', 'UFO', 'Quest for the Rings', 'Conquest of the World', 'Freedom Fighters', 'KC Munchkin' and 'Attack of the Time Lord'. I even tried my hand at 'Computer Intro' which taught me some basic programming concepts using assembly language. I convinced myself that the Odyssey 2 was a superior system (crappy ports like 'Pac-Man' for the 'Atari 2600' reinforced my self-serving belief system) but I was finally blown out of the water by the 'Mattel Intellivision' and later the 'ColecoVision'.

My high school had a computer lab that consisted of about a dozen TRS-80's. I was told that I didn't have the aptitude for the formal computer classes offered (I am a career computer programmer now, go figure...) so I did the only thing I could do at the time to get at these computers, I joined the after-school computer club. I spent many evenings learning BASIC and writing simple programs. I was fascinated with playing the many homegrown games and with a new concept called cassette-tape-backup!

I later had several friends (from a large group of fellow D&D players) whose families owned Atari 800's. I fell in love with text based adventures like 'Zork' and then later cool games like 'M.U.L.E.' I spent the entire summer of 1983 playing 'Ultima III' with friends.

I went into the Navy in January 1984 and was away from computer gaming for about a year and a half (not sure what impact I had on the big crash of 84...) until I purchased a used 'C=64' from my boss in the summer 1985 with some unexpected tax refund money. He gave me a ton of games and cartridges and even a printer with almost no ink left on its twice-recycled ribbon. I remember sending letters home from this printer that were barely readable... but it was too cool! From that point on, I spent all of my spare money on C=64 software (better this than beer!). I have fond memories playing games like 'Archon', 'Impossible Mission' and 'Raid Over Bungling Bay'. My first internet like experience came from a modem based service named 'Quantum Link' (Q-Link). I loved the chat rooms and even wrote and uploaded some simple programs for their shareware/freeware library. I was also hopelessly addicted to

a modem based strategy game by Dan Bunten (creator of M.U.L.E.) called 'Modem Wars' and later got lost in a Program-your-own-A.I.-Bot type game called 'Omega Cybertank' by Origin Systems.

After the Navy (and a brief career climbing radio towers) I landed my first job with a large computer company, where after two years of servicing them, I was able to purchase my first PC. I quickly sold my entire Commodore 64 collection (2 CPU's, 2 disk drives, printer, monitor, modem and about 400 games) for \$50 at a friend's garage sale. I still regret that brilliant move... Thank God for emulation.

Over the next few years I was addicted to PC games (both playing them and writing them). I had sworn off all of the dedicated console systems and was content in my PC snobbery, until one day for whatever reason; I grew bored with PC computer games. Looking back at it, my real problem was that every game I purchased required a huge investment in my free time to complete. I rarely completed any game and was amassing a huge collection of unfinished (and in some cases un-opened) games. I purchased all of my games and hardware upgrades with money I made from selling games that I wrote (the most popular game being inspired by my experience with Omega Cybertank on the C=64). My kids were too young to share them with. I simply did not have the free time to dedicate to them anymore. Then one day (on impulse) I decided to get a 'Nintendo GameCube'. An earlier bad impulse buy landed me a Toshiba 'Nuon' based DVD player just before the Nuon game market failed to catch on and crashed. The GameCube seemed like the perfect answer, I could play simple games that required no effort to install and quickly booted for play, many of them were even appealing and simple enough for my young kids to enjoy! Most of the games I purchased were simple games that brought me back to the days of the Odyssey 2 and hanging out at the Arcades. They required little time investment and were easily accessible when I only had a few minutes to play them! Best of all the GameCube system was purchased for less than the price of 2 popular new PC games. It was quite liberating to own a system that would require no hardware tweaking and was guaranteed to run all games made for it at optimal performance.

My slide back to gaming consoles brought with it, the purchase of a second GameCube (for backup), 'PlayStation 2', 'GameBoy SP', 'XAVIX Port' and then a 'XOBX' and a second backup XBOX. All of this coincided with me getting back into emulation and playing all of the old console games I missed out on over the past decade. I even purchased a 'multi-cart' for my old Odyssey 2 and a 'Vectrex' along with a Vextrex Multi-Cart.

I guess I earned my ultimate geek-wings when I finally built not one, but two full size arcade cabinets (actually the second one was built along with 3 other clones for friends).

Yes I am a hopeless gaming-computer geek. I have no plans for recovery and my kids are following in my footsteps (much to their mother's dismay). I must admit that the current console games are starting to go down the path of the more complex PC games now that the technology is getting better, but there still seems to be a good supply of the simple games that require nothing but 10 minutes of my time and a fast itchy trigger finger. Life is good.

You can read more about the games I wrote and my arcade cabinet projects on my web site at http://www.tacticalneuronics.com/.

Game Programming by John Reder

Retrogaming Times Monthly - September 2008

I love the old days of 8-bit computing. I knew that I'd grow up to be a software programmer ever since I got my Odyssey2 for Christmas in 1980. I remember reading an Odyssey2 fan club magazine article about the guy behind almost every Odyssey2 game ever written (well, at least 24 of them) Ed Averett. One day a friend and I used the O2 Computer Intro cartridge to write a small Assembler program that consisted of a standard blocky Odyssey2 man graphic walking across the screen from right to left. To our horror after several hours of programming, we realized that there was no way to save our work! Oh well, over the years I kept up my computer programming skills as I first learned how to program in BASIC on the Radio Shack TRS-80, then while in the Navy I purchased a Commodore 64 where I continued to hone my BASIC programming skills. After many years in the private sector as an electronics technician, I started coding again, and have been a professional programmer ever since. Like most programmers, my career isn't as glamorous as writing video games, no, most of us develop accounting and reporting software, and in my case, I also get to write healthcare management and clinical data entry systems for a large pediatric hospital. Most of my programs these days are web based but I still write in the BASIC language (mostly in Visual Basic and ASP.NET). Although, by day I code for work, but by night I code for fun. Yes, my best video game memories of late have not been from playing games, but from writing them. Seems I have more fun writing games than playing them. Although I have turned my basement into a collection of almost every computer and game console ever created including several Arcade cabinet projects, I keep thinking fondly of my first video game experiences and how they inspired me into both my career and my hobby.

Anyway back to the point of my article. Over the years I have written games that brought me back to some of my favorite experiences. Almost every game I write has its roots in one of my all-time 8-bit favorites. They say imitation is the sincerest form of flattery, For example, My first few games 'The Dungeons of Grimlor' 1 and 2, 1994 and 'Solder Runner' 1995 were inspired by Richard Garroitt's 'Ultima III: Exodus' 1983. Later, my 'A.I. Wars (The Insect Mind) ' 1996 was inspired by the 1989 C64 game called Omega Cybertank – Origin Systems, where you programmed your own Artificial Intelligence and pitted it against others. These were done in MS Quick Basic and Visual Basic and the newer A.I. Wars 3D elements were done in Dark Basic. Now I'm developing freeware GameBoy Advance games in a language called Dragon Basic (with the Nintendo DS being several years old, the older GameBoy Advance has become another classic system from the past!) My two 2008 GBA games are 'Pocket Commander' inspired by Dan Bunten's 1989 game called 'Modem Wars' and 'Pocket Raider' inspired by Will Wrights's 1984 game 'Raid on Bungling Bay', I even hid an Easter egg in the game which was inspired by Warren Robinett's Atari 2600 game 'Adventure' – the first commercial video game to hide a

hidden screen giving credit to the programmer (At the time Atari would not let their programmers take credit for their work).

As you can see, I really love video games and their historical roots, which is why I have been reading this newsletter ever since its first issue! Like many of you I am a video game archeologist doing my best to preserve and give credit to the original creators of our favorite hobby. With that said, I only have one more dedication to give. Thank you Ralph Baer for your work on creating the first home console prototype and for inspiring Nolan Bushnell to take it to the next level with his 'Pong' and the formation of Atari!

You can get most of my games for free (Including Adventure Studio where you can create your own ZORK type of text based adventure!) if you want to play them for yourselves at TacticalNeuronics.com

Christmas Memories From The Golden Era by John Reder

Retrogaming Times Monthly - December 2009

It was late 1979, I was a 14 year old boy looking through a Service Merchandise catalog while dreaming about the coming Christmas. I was a big fan of electronic handheld games and had looked completely through that section and was almost finished when I noticed, near the back pages...something I didn't quite recognize. I was looking at two video game systems that connected to your TV! The first thing I noticed was the high-tech touch-sensitive keyboard on the Magnavox system and the second was the fact that the TV screen in the ad didn't show a PONG game on it. Instead, it was a color picture of some kind of racing game like you'd see in the arcades! What the h...I muttered to myself, then I noticed that you could plug these cartridge things into it for more games like Blackjack, Baseball and a cool looking space game called Cosmic Conflict...hmmm I thought to myself, could this Cosmic Conflict game really be like flying a spaceship?! After a short Star Wars style daydream about flying through space and shooting enemies with my laser blasters I took a look at the other system prominently displayed on the opposite page from a company name I kind of recognized from the pinball arcade down the street...Atari. After some careful thought I decided that the one with the big keyboard looked pretty neat and it had that awesome Cosmic Conflict space game for which I knew I just had to own! I realize now 30 years later that this was a pretty lame reason, but at the time it looked like something from a science fiction movie and it really sparked my imagination. I took a pencil and put a huge circle around it knowing that my parents used those circles to base their Christmas purchase decisions on. My mother noticed it, and decided that she needed to talk with me about the price which was a whopping \$179.99, she and I knew

that this was a bigger ticket item than my parents typically spent; they also had to make sure that my sister had an equally good Christmas, if not in cost at least in similar items. They finally decided to get it for me and my sister would receive another electronic game called Microvision by Milton Bradley as her big ticket item.

Soon Christmas came and I quickly found the Magnavox Odyssey 2 under the tree and thought that the box was the coolest thing I ever saw, its explosive letters popping out at me and all those video game characters like race cars, football and baseball players all zooming out. This helped to set my mind into the right frame to play any game from that era. In those days the graphics were simple placeholders for your imagination to attach your fictional characters too; in your mind you were seeing those pictures from the boxes and their accompanying manuals. After a few tense moments wiring the thing up to my TV and my parents begging me not to electrocute myself while hooking it into the antenna (back then we didn't know any better), I powered it on and quickly learned what the screen looked and sounded like when you turned it on without a cartridge in the slot, basically it's like your system threw up onto your TV screen accompanied by a loud static/explosion hissssssssss!!! After briefly losing my mind and getting my heart back into my chest, I managed to turn it back off and carefully read the manual which clearly said to "insert the cartridge BEFORE you turn the system on". Crossing my fingers and hoping that I didn't fry my system in its first two seconds of life, I gently inserted the cartridge that came with it (Speedway, Spinout and Crypto Logic) into the slot and then turned it back on... and... that's when I heard the cheerful tone sound that to this day makes me nostalgic for those first few days of video game system ownership ...BOODELLLLETT... as the colorful words "SELECT GAME" appeared on my TV screen. Wow! I wish I could bottle that feeling and sell it!

Other Odyssey 2 games that were found under the Christmas tree included Armored Encounter/Sub Chase, Cosmic Conflict, Football and Baseball! I remember my dad challenging me at a game of Football and also completing my first successful pass to score a touchdown against his team, it was an amazing feeling and I believe it was the last video game I ever played against my dad. That was one moment that I haven't forgotten in all these years. Later Christmases and birthdays brought me more and more Odyssey 2 games but the greatest Christmas of all was, by far, the first. I will admit that the Odyssey 2 games got better over time with a few disappointments sprinkled in like Alien Invaders Plus, but the best ones came long after those first few holiday seasons. I had some friends and cousins end up with Atari VCS systems and I have to admit I thought that they were cool, but for years I was convinced that I made the right choice with the Odyssey 2. I even credit it for launching the first sparks of my computer career with those valuable lessons I learned learning assembly with the Computer Intro cartridge and its unbelievably well done spiral bound tome of 1970's computer secrets!

During the later years with my Odyssey 2, I was given the "Voice of Odyssey" sometime around 1982, which was one of the coolest things I had ever seen at that time. A handful of games took advantage of it, but the most fun I had was using the Type and Tell cartridge to create synthesized speeches and then taping them with my tape recorder. Other High points were the "Challenger Series" games starting with UFO and leading to Pick Axe Pete and the best Pac-man clone of the time, K.C. Munchkin, followed by his later post-Atari-lawsuit version, K.C.'s Crazy Chase. As a side note, I wrote a free homebrew game poking fun at this character for the Atari 2600 called K.C.'s Crazy Nightmare – feel free to visit my web site and download it here http://tacticalneuronics.com/content/KCsCrazyNightmare.asp.

The last highpoint of owning my Odyssey 2 system came with the "Master Strategy Series" starting off with The Quest for the Rings. This was something to behold, a beautiful board game/map with real quality metal playing pieces and an artful keyboard overlay, the set was completed by a solid heavy chest-like box and beautifully illustrated golden players manual. This Lord of the Rings inspired dungeon crawl made great use of the keyboard and was an amazing adventure game experience for someone who was just getting into Dungeons and Dragons. Finally, something similar to Atari's great game named Adventure rounded out my later Odyssey 2 days!

I still have my Odyssey 2 and I recently purchased an Atari VCS, initially to play the cartridge versions of some recent homebrew games I wrote but quickly I started collecting some of their best offerings to round out my historical "Golden Era" of video gaming personal collection. The two systems are wonderful and if you ask me today I can find reasons why each one is superior to the other in their own way, but I give props to Atari for having by far the best overall library. Odyssey 2, although not as successful as Atari, managed to release a few games that gave me pride in it. Later in life I discovered that many of these titles were written by one man, Ed Averett, for whom I can thank for some of my best childhood video gaming memories! As a 21st century programmer I can only dream to have such a professional influence as he did.

By the way, my sister's Microvision, a handheld game that came with a packed in copy of Block Buster (a breakout clone), was never graced with more than a handful of games (I believe she also had the bowling game for it). It was an idea that was a decade or so ahead of its time leaving a void until the Nintendo Gameboy came along to take the ball and totally run away with it.

That's my story. Here is wishing all of you a wonderful Christmas/Holiday season.

John Reder programs homebrew cartridges for the Atari 2600 among other systems. If you are interested in seeing more on what John has done, check out his website athttp://TacticalNeuronics.com.

Retro What If...? by John Reder

Retrogaming Times Monthly - March 2010

Recently I discovered a game that I should have known about but never did. It seems to be well known in some circles and has been around since 1993, but many of my friends, who like me claim to be life long gamers, were just as surprised as I was to recently learn of it. I've got to tell you that this game has everything I love all rolled into one simple 9MB download. What is the game you might ask? Well, it appears to be the answer to a big 'what if' question, 'what if Battlezone were multiplayer?' If you

haven't heard of BZFlag (Battle Zone: Capture the Flag) before, this is the game that answers that question.

If you read many of the books out there that cover the early years of Atari you may recall a story about how Atari licensed a version of Battlezone to the military for training purposes. This is not that version, but to me it feels a lot like how I pictured it would be!

When you download BZFlag and install it on your system (it is an Open Source project and can run on many systems like Linux, Windows and Mac) it installs in a few quick seconds. When you start it up, you will need to give it a call-sign and a password. It will accept anything in these fields. They are there for you if you choose to register them with the stats site to track your in-game abilities. The stats registration is also free and there is no cost involved in playing this game.

About the game:

This game is very simple, and this is why it and any other classic game appeals to me. I just want to be able to turn it on, play for a few minutes, then get out cleanly. It is a fun time waster if you have only a few minutes to spare, but beware, you might find yourself hooked. It's possible to spend all night on-line blasting away in heated closely contested battles.

In the game, you are a tank driver and given the same perspective as you remember from the old arcade game Battlezone. The games' graphics engine scales from simple polygons all the way up to textured objects and cool lighting effects. It can run well on some pretty old machines as well. The graphics aren't the best compared to today's high end titles, but for us classic gamers, we understand that the graphics aren't what makes a game fun. BZFlag has many servers to choose from, each server may have a unique custom battlefield configuration (Map) as well as its own variant of the in-game rules (note that you can also download many map editors for free and host your own server if you wish). Some servers are simple drive and shoot ones using a single weapon around flat battlefields, while others give you the ability to jump or fly taking the battles into surreal Escher-like vertical challenges. The game may have dozens of power-ups in the form of little white flags strewn about the map which give you everything from specialized weapons or the ability to go through barriers to others with a more negative impact, like only allowing you to make left turns.

The basic game variants are 'Capture the flag', 'Rabbit Chase', 'King of the Hill' and 'Free for All'. The main idea is to kill other tanks in order to up your score, in team based games you want to avoid shooting tanks that are the same color as you are. There can be up to 4 unique teams playing at the same time, with an additional player type simply called a Rogue. The Rogue role is for players who would rather shoot at everything than be part of a team. They get no points for captured flags and are simply there to get kills. In any case, each game is fast, furious and usually filled with players who have become v-e-r-y good. It might be overwhelming at first, but once you learn some of the strategies that are commonly used you begin to score some points of your own. The game defaults to keyboard and mouse for controls, but I found setting it up to use a joystick gave me quicker reflexes and higher scores.

I thought that this now 17 year old game was worth a mention here, since it was obviously inspired by the old Atari arcade classic and brings to life my old fantasy of playing Battlezone against real people! If you try it out, look for me on the battlefield, my call-sign is 'RedRum65' and my stats are downright embarrassing, but I'm hoping to redeem myself in the near future! Happy hunting!

The Cybernet Society 1995-1997 R.I.P. by John Reder

Retrogaming Times Monthly - April 2010

It was December 1994, everyone had gone home from the office but I was still there, hovering over an unstable FTP session and trying to download the new shareware version of a game that was just released by a company named ID Software. It took several attempts as the host server was being overwhelmed but I finally managed to connect long enough to download it. The new game was 'Doom'. My mind was blown. I was first taken by the unbelievable 3D graphics and then something unexpected... I discovered that this game was playable by up to four players using an IPX based network! The universal forces as they were had just aligned! Fortunately, for me, IPX was something I knew. I was just certified as a Novell CNE/CNA and was one of the three administrators over all of the systems in our divisional datacenter and Test Lab. If it had a plug, it was ours to setup and administrate, including a couple of recently retired Novel 3.11 servers. We just switched our departmental file servers over to Windows NT a month earlier. I had both the knowledge and the access, so within a few hours, I had it up and running on a special game volume. Then I created several 3.5" disk copies of a custom network configuration/driver boot disk that, once inserted in any workstation in our complex, it would launch Doom directly for network play. After talking a few coworkers into testing it out later in the week ...ahem...over lunch of course...we quickly discovered that the entire network had become overwhelmed with IPX broadcast message traffic and we hastily shut down our experiment. Obviously, I did not know as much as I thought. Actually, ID Software needed to fine-tune their in-game network code and a patch was soon released. It seems that office networks were going down all over the country for this very same reason!



CyberNET Society Boot Disk

We smartly decided to restrict this activity until after normal business hours and our secret 'Cybernet Society' was formally born. Actually, it was not so secret, and after a few short days, our membership started to grow. Among them were several members of our department's management team so our guilty pleasure quickly became 'guiltless management condoned pleasure!' Everything was cool with them as long as we did it after hours and did our best to leave everything as we found it when using the phones and workstations. Not long after Doom's release, another lesser known game developed from ID's old business partner 'Apogee Software' (using ID's older Wolfenstein3D engine) released a game under a new company brand called '3DRealms' who had licensed ID's old engine and practically rebuilt it from the ground up. This game was called 'Rise of the Triad' and it took the network play up another notch by allowing 11 players at one time (actually one player was reserved for the multiplayer server process) allowing 10 players to be online in a single game! They also introduced a ton of crazy fun weapons and creative power-ups, as well as a mode called 'Capture the Triad' (Basically Capture the Flag)!

Within a few days, I also discovered another great network playable game called 'Descent'. This was a zero-G sci-fi flying game, which gave you full 360-degree movement in any direction. Great fun, but it took some getting used to, since you could enter and exit rooms in any orientation. This made memorizing the level layouts and knowing your relative position within them a lot more challenging. This was when I changed the workstation boot disks to have a cool graphical splash screen and a multiboot game selection menu. We also purchased licensed copies of all of these games. Rise of the Triad (ROTT) actually sold us a site license, which came with extra bonus multiplayer levels! Life was good!

Over the course of the next few years we expanded our game library with every network playable game we could find, adding titles like Quake, Heretic, Hexen, Terminal Velocity, Duke Nukem 3D, Witchhaven, Command & Conquer (C&C), C&C RED Alert, Total Annihilation and Warcraft 2.

We soon developed a pattern, which started with playing a few quick rounds on our current favorite first person shooter (FPS). Note that my favorite was ROTT; for some reason I did better than most, a skill I have most definitely lost in playing today's FPS games. Then we would spend the remaining bulk of our evenings playing one of our newer real time strategy (RTS) games, most commonly C&C or Warcraft 2. Around this time, some team members started bringing their kids into work to join us. We quickly learned that those kids were absolute masters at RTS games. We found ourselves humbled by their ability to out build and overrun us within minutes. We even introduced the concept of a 'build phase truce' for the first 20 minutes of each round so we could at least try to be creative and come up with the ultimate defense against their tactics, but it did not seem to stop them. In RTS games it seems that a good defense *is* a good offense. Unfortunately, for us, we could not compete.

We had a blast; we played every Thursday night promptly at 6PM. We called it our 'Thursday Night Fights'. We had our pick from over 100 workstations, all recently upgraded and each one came complete with a brand new 20" monitor, 640x480 pixels never looked so good! We used the facilities phone switch network to conference us all in and we usually played until 9PM.

In late 1996, my daughter was born and as with all new first time parents my life and my priorities changed. Within a few months, I took a job closer to home for various reasons and my participation in the Cybernet Society started to wane. Now I was an afterhours 'guest' in my former employers complex (which was a strange feeling; I even provided some free help patching up some of the software and automated solutions I developed just before I resigned, it's always a good idea not to burn bridges...). It was not much longer before the company closed that office and my former Cybernet brothers were all scattered to the wind. I still keep in touch with some of them, but I sincerely miss them all. That era will live on in my mind as one of my best gaming experiences right alongside of getting my first video game console (Magnavox Odussey2), playing Dungeons and Dragons with my high school circle of friends, getting my first real computer (Commodore 64), and more recently, turning a friends garage into a small arcade machine construction factory! (That's another story - http://tacticalneuronics.com/content/ArcadeProject.asp)

I have included some links at the end of this article to more recent versions of some of our old Cybernet Society favorites (New wine, Old Bottles?). I highly recommend looking into the new updated 'Rise of the Triad' WinROTT. This game has some of the most hilarious/creative weapons and power-ups I have ever seen in a game. My all-time favorite was the 'Drunk Missile'; this thing fired five heat seeking missiles at once and I found that when playing in open outside maps (read: no ceiling) you could simply point the thing at the sky, fire your weapon, and watch the missiles go up, acquire five unsuspecting

ground targets and then quickly rain down as an unseen 'death from above!' Winning a death-match with 21 points using this technique only took me about 20-40 seconds... my personal version of shock-and-awe... hehe... I'll never forget the first time I saw another player blow up from one of these and an eyeball flew at my screen... those were the days. Ahh, the innocence of my youth.

Rise of the Triad (WinROTT): http://www.riseofthetriad.dk/index.php

- Doom, Heretic, Hexen (jDoom, jHeretic, jHexen): http://doom.wikia.com/wiki/Doomsday
- Descent, Descent II (DXX-Rebirth): http://www.dxx-rebirth.com
- Command and Conquer (Official Site): http://www.commandandconquer.com/classic
- Terminal Velocity (3DRealms): http://www.3drealms.com/tv/
- Duke Nukem 3D (3DRealms): http://www.3drealms.com/duke3d/index.html
- WarCraft II (Wikipedia): http://en.wikipedia.org/wiki/Warcraft_II
- Total Annihilation (Wikipedia): http://en.wikipedia.org/wiki/Total_Annihilation
- Quake (Wikipedia): http://en.wikipedia.org/wiki/Quake (video game)